CC For your information, we got about 6 minutes left on this pass.
CDR in to that day 2 activation tomorrow, as soon as we get up and eat.
CC Okay, no need to rush.
CC While I got you here, we talked about that reset routine. I don't know whether that bugged you at all. The motion, it could get up into as much as 3/10 of a degree per second if we - on some of them, we have seen those kind of things.
CDR Yeah. Is it maneuvering right now?
CC I don't beleive so.
CDR Okay, well, we got the window shades up, so we don't know what you guys are doing.
CC Very good. And Pete, that potable tank and that valve is okay like you got it.
CDR Okay.
CC Skylab, Houston. If you need us for any reason tonight, if you'd give us a VERB 99, we'll have AOS.
CDR Okay.
CC Skylab, Houston. We're 1 minute til LOS and we'll see you manana. Nighty-Nite.
CDR Nighty-Nite honey.
CDR Hey Crip, you still with us.
CC Affirm.
CDR Hey, I just wanted to impress on everybody how - how black or burnt looking that gold foil was getting on the sunny side of the vehicle. I suspect that's the reason your temperature is going up. That mylar's just deteriorating or whatever that gold stuff is.
CC Roger. I think they got that impression today during the fire up.
CDR Okay.
CC Let's hope the parasol takes care of it.
CDR Yeah. Now that we're docked, I'm not sure how we get undocked.
CC We'll work on that.
PAO We have lost the signal at Guam and the crew should be going to sleep very shortly now. They will wake up at their will in the morning. Probably sometime after 9:00 a.m. central daylight time. During the evening a reset maneuver will be preformed to reset the control moment gyros, beside that it should be a rather quite evening. Systems are being monitered. Temperatures seem to be at very acceptable levels. The suit coolant loop, which has given some concern earlier in the last few days

SL-II MC-66/1
Time: 04:00 a.m. CDT; 20:00 GZT
5/26/73

PAO This is Skylab Control at 9 hours Greenwich mean time. At the present time the Flight Controller, Milt Windler, and his team of flight controllers are planning a slight attitude adjustment to take place approximately 9:58 Greenwich mean time, that's a little less than an hour from now at Honeysuckle tracking station. That will be later in rev 170. We are at this point - I take that back - that's on rev 169 . We are at this point early in rev 169, just beginning our pass over the Equator and we're headed to the northeast - headed for the Canary Island tracking station. We'll have acquisition of signal there in a little over 4 minutes. There have been no new problems arising in the mission and everything looks successful. We expect the crew to be awakening at approximately 9 o'clock, but they will not be alerted. They will wake up on their own - at their own time and will announce their awakening to us and we'll be waiting for that sometime after 9:00 a.m. central daylight time. This is Skylab Control at 1 minute and 8 seconds after the hour.

END OF TAPE

SL-II MC-67/1
Time: 05:00 CST 21:00 GET
5/26/73

PAO This is Skylab Control at 10 hours Greenwich mean time. At the present time repressurization of the orbital workshop area is preceeding on schedule towards a completion about 12:49 Greenwich mean time. 2 hours and 50 minutes from now. Making the station ready for habitation before the crew wakes up sometime after 1400 Greenwich mean time. At this time the pressure indicator in that area are reading about 3.9 pounds per square inch. There are expected - The crew's expected to enter the workshop about 1600 Greenwich mean time, depending on crew wakeup. That's assuming they wake up after about 8 hours of sleep. Power usage during the final depressurization cycle in the orbital workshop has been relatively high and Flight Director Milton Windler has reduced the pitch of the space station to bring more direct sunlight on the ATM solar panels, thus increasing the charge levels of the seventeen batteries still operating aboard Skylab. Charger battery regulator module number 15, which ceased operations earlier in the mission continues to show no amperage and is apparently has a stuck relay that cannot be repaired by the crew. This inactive CBRM will cost an estimated 150 to 200 watts in power generation. Battery charge is relatively low, as electronic equipment is being operated to provide heat needed to warm oxygen as it is released into the workshop to prevent coolant temperatures from dropping. The reduction of pitchup to 45 degrees, which began about 5 minutes ago, will charge batteries, which should be at high levels before the crew begins activation later today. Temperatures in the water coolant loop that connects the suit umbilical system have been rising steadily after a very low pitch angle of about 25 degress up was used during the preceeding night. At the present time the SUS coolant inlet temperature reads 37.3 degrees Fahrenheit, far above the freezing that caused concern for several days this past week. Estimated temperature in the food storage area is now at about 127 degrees and may be expected to rise 1 to 2 degrees before the crew enters. As a result of the lower pitch angle now being used to charge the ATM batteries. At the present time there have been no additional problems arising at the Skylab Mission Control Center. And we expect a change of shift at 7:00 this morning as Flight Director Milton Windler goes off and Flight Director Neil Hutchinson comes on. This is Skylab Mission Control Houston at 10 hours 2 minutes and 40 seconds, Greenwich mean time.

END OF TAPE

SL-II MC-68/1
Time: 06:00 a.m. CDT, 22:00 GET
5/26/73

PAO This is Skylab Control at 11 hours Greenwich mean time. At the present time all systems are still operating properly on the Skylab workshop and in the command module. The temperature right now in the cabin of the command module is 69.3 degrees and the pressure level in there is 4.95. We have continued to pressurize the orbital workshop. It is now past the 4 pound per square inch level, and will rise to 5 pounds per square inch in plenty of time for a crew wakeup and they're having no problems with any of those systems so far. The TACS consumable status right now is that we have 54.5 percent of the total amount of TACS gas originally carried still in the tank. Considerable amount of TACS gas was used last night but there still remains approximately 30 percent more than is required for all experiments and maneuvers throughout an eight month period. This is about 8 percent at this time - about 8 percent more than was expected in the flight plan so that there's a - there's fortunately a very large pad in this area so that we have plenty of TACS gas remaining. But there was quite a lot used last night during the maneuver. This is Skylab Control at 11 hours 1 minute and 16 seconds Greenwich mean time.

END OF TAPE

SL-II MC-69/1
Time: 07:00 a.m. CDT, 00:23:00 GET
5/26/73

PAO Skylab Control, Houston, at 1200 hours Greenwich mean time. The Skylab orbital assembly now traveling in an orbit of 239 nautical miles by 235 nautical miles, presently passing over the southeast portion of the Pacific Ocean. The next tracking station to acquire will be Texas, some 7 minutes from this time. The Skylab crew aboard the command module are still in their rest period. Wake-up time is presently somewhat open-handed; however, it should be around 9 o'clock central daylight time, or 1400 hours G.m.t. Also, the assignment of the Mission Control Center is being handled in much the same way. Flight Director Milt Windler's team is still on duty. However, it is expected that they will be replaced by the Neil Hutchinson team shortly. At 1200 hours G.m.t., this is Skylab Control, Houston.

END OF TAPE

SL-II MC70/1
Time: 08:00 a.m. CDT, 1:00:00:00 GET
5/26/73

PAO Skylab Control, Houston, at 1300 hours Greenwich mean time. The Skylab orbital assembly presently in an orbit of 239 nautical miles by 235 nautical miles. Presently passing over the Indian Ocean on the 171st revolution for the Saturn workshop. Meanwhile, in Mission Control, the Neil Hutchinson team is beginning to arrive on the scene. Their team color is silver. Presently, discussions are centering on the activation checklist, which represents the procedures that the crew aboard Skylab will follow for entry into the workshop today. We're at 1300 hours 1 minute Greenwich mean time. This is Skylab Control, Houston.

END OF TAPE

SL-II MC-71/1
Time: 09:00 a.m. CDT, 1:00:60 GMT
5/26/73

PAO Skylab Control, Houston, at 1400 hours GMT. Skylab is presently in an orbit of 239 nautical miles by 235 nautical miles and under acquisition, at this time, by Newfoundland Tracking. The next station to acquire will be Madrid, in approximately 3 minutes. Meanwhile, in the Mission Control Center, Flight Director Neil Hutchinson continuing to go around the room consulting with his flight control team on the very detailed activation checklist, which the Skylab Crew will follow when they enter the workshop for parasol deployment later on today. Presently, no plans are laid on for a detailed analysis of the probe by the crew after it's removed for entry into the multiple docking adapter. And also, at this time, there is still no definite indication as to when Conrad, Weitz, and Kerwin will wake up to start their work day. We're at 14 hours 1 minute GMT; this is Skylab Control, Houston.

END OF TAPE

SL-II MC-72/1
Time: 09:05 a.m. CDT, 01:01:04 GMT
5/26/73

CC Skylab, Houston. Good morning.
SC Hi there.
CC How is it going this morning? You guys rest good?
SC Yeah, we slept pretty good. We're just - we really just got up just a few seconds ago, and we'll try and put (cut out) and get with it.
CC Okay.
SC What friendly words did you all think about over the night?
PAO Spacecraft Commander, Pete Conrad, talking with CAP COM, Henry Hartsfield, here in the Mission Control Center. Per an agreement, which was reached last night when the VERB 99 flashed up in the DSKY, the crew was saying they were ready to talk. We see VERB 99 now on the command module computer display.
PAO Skylab Control, Houston. We have approximately 5 minutes remaining on this Madrid pass; the next station to acquire will be Honeysuckle, and that's about 42 minutes from this time.
SC Hey, Henry, where are we?
CC You're over Madrid now.
SC We thank you.
PAO That was Paul Weitz chiming in to the conversation, asking for location - -
CC Four more minutes on this pass.
SC You got any big changes for us, or are we going to crap off on day 2 the way we got it figured?
CC Yeah, Pete, we're working on it now. What we want to do is get together a package for you; try to have it either at Honeysuckle or stateside before we get going here. And we got a few changes for the activation checklist, and we're also going to have some questions for you on probe removal. We'd like to check a few things, before we pull that thing out, to help us in the troubleshooting. And the main thing is, we want to just kind of relax here a bit and get organized and start off on the right foot.
SC Okay, very good. I was thinking about that probe, too. You know we did lose a little nut, but if you got another one of those around anywhere in the spacecraft, we could always rob it.
CC Roger; copy.
PAO About a minute away now from loss of -
CC About 1 minute to LOS; we .1 be picking you up at Honeysuckle at 00:50:00.
SC Right. Honeysuckle at 00:50:00.
PAO Skylab Control, Houston; 14 hours 12 minutes G.m.t. We've had loss of signal with Madrid. Next station to acquire is Honeysuckle in approximately 37 minutes.

END OF TAPE

SL-II MC-73/1
Time: 09:48 a.m. CDT; 1:01:48 GET
5/26/73

PAO Skylab Control, Houston, at 14 hours 48 minutes Greenwich mean time. About a minute away now from acquisition with Honeysuckle. This will be a very short pass, approximately 1 minute and 55 seconds in duration. We may or may not start passing to the crew the checklist change items for the activation. It will be a crew option. We'll stand by and monitor.

CC Skylab, Houston. ... Honeysuckle for a minute and a half.

SC We can't tell us much then, can you?

CC No, Pete, but I'll tell you what we've got here. We've got all the checklist changes put together in a little package. There's about 11 of them that should bring the activation checklist up to date. Rusty's working on the questions on the probe. And if you like, we'll hold that off to stateside. We're also planning a private conference before Madrid, which will be coming up at 00:40:00.

SC Okay. Whose the private with?

CC Okay. It'll be with the surgeon.

SC All righty.

SC If you could go ahead, maybe - - Yeah, let me get an activation checklist of my dumps while I have just finished breakfast, and I'll copy some of this.

CC Okay. And the computer's yours, too.

SC Okay. How about battery A, has that got a good enough charge on it, yet?

CC Okay. We want to let it continue to charge. And ah - We've only got about 15 seconds left here (static) at Goldstone, which is coming up at 00:18:00.

CC I'll repeat. Goldstone at 00:18:00.

SC Okay. Roger.

PAO Skylab Control, Houston, at 14 hours 52 minutes GMT. We've just had loss of signal with Honeysuckle. The next station to acquire over the States will be Goldstone, approximately 26 minutes from this time.

END OF TAPE

SL-II MC74/1
Time: 10:02 a.m. CDT, 1:02:02 GET
3/26/73

PAO Skylab Control Houston, at 15 hours 2 minutes Greenwich mean time. The private conversation referred to by CAP COM Henry Hartsfield during the up coming Madrid pass is the routinely scheduled surgeon crew conversation set up on a daily basis. A medical bulletin will be released later. We're at 15 hours 3 minutes Gmt. This is Skylab Control, Houston.

END OF TAPE

SL-II MC75/1
Time: 10:17 a.m. CDT, 1:02:17 GET
5/26/73

PAO Skylab Control, Houston at 13 hours 17 minutes Greenwich mean time, approximately one minute away now from acquisition through Goldstone. The Skylab workshop presently in a orbit of 238.9 nautical miles by 235.1. During the stateside pass we expect checklist changes.

PAO Standing by now for Henry Hartsfield's call up to the crew.

CC Skylab Houston stateside for about 11 1/2 minutes.

SC Okay we're ready to copy. We've got the activation checklist open. Be advised that we've pressurized the tunnel and we had very little leakage on it last night, maybe a tenth of a psi. So we got a good tunnel and we're standing by for your word.

CC Roger. Copy. The first item is on page A-3, that's a little time line we put in the front of the checklist.

SC Up there that's mission day 2. Go ahead.

CC Okay there is just a typo there on the M148 relocation. It gives you page 2-12; that really should be page 2-121.

SC Okay, whose column is that in?

CC SPT column.

SC Yeah, and it should be 2 dash what?

CC 2-121.

SC Okay. We got it.

CC Okay the next one is on page A-5.

SC Go ahead.

CC And the CDR column all the way at the bottom of the page the quiescent configuration - we just want to write a little note there Pete to the effect that do not configure panel 275 until all battery charging is complete.

SC Understand.

CC Okay. The next one is on page A-10.

SC Go ahead.

CC Okay step 6. The TV input station 320 should be 133. The same thing applies to step 7 that should be panel 133. Okay after step 10 we want to add a step 10-A that says VTR power switch on.

SC Okay.

CC And step 12, second line, that panel 320 should be 133. And in addition after VTR standby we want to add VTR power switch OFF.

SC We've got it.

CC Okay next one is on A-13.

SC Go ahead.

CC Okay. The first two lines up there should be changed to read connect CWG electrical harness to CCA.

SC Okay.
CC Okay. A-15. On the stowage location for 16 millimeter cassette takeup it should be VOX 524 instead of 527.
SC Okay. Got that one.
CC Okay now if you'll jump over in activation checklist to page 2-18 -
SC All right go ahead, E MEMORY DUMP?
CC Roger. After the E MEMORY DUMP there we want a note to the effect that after guidance has given a GO on the E MEMORY DUMP, perform P06, program 06, CMC POWER DOWN and that's on page 2-78.
SC Okay.
CC Okay the next one is on page 2-29.
SC Go ahead.
CC Okay we want to delete the last line of step 2 which reads panel 311 pressure equalization valve OPEN, we want to leave it CLOSED.
SC Okay.
CC Okay. The next one is on page 2-42; these are the changes to your ATM panel configuration, command changes, -
SC Okay, go ahead.
CC Okay about halfway down the lefthand side where it says mode talkback solar inertial it should be CMG.
SC Roger.
CC Okay, righthand side status word 2, counter 1 indicator should be 0353.
SC Okay.
CC Status word 4, counter 2 should read 1000.
SC You cut out Hank. What was the (garble) switch.
CC Okay, 1000. Did you copy?
SC No. Say the checks both once again, Hank.
CC One thousand, 1000.
SC Okay.
CC Okay on the rate gyro monitor Y should be 3/1.
SC Okay.
CC Okay the next one is on page 2-43, right under the last item that we've got pinned in there about the hold for 25 seconds, we want to add EVA AUTO DOOR SWITCH to STORAGE.
SC Okay.
CC Okay the next one is on page 2-50.

SL-II KC75/3
Time: 10:17 a.m. CDT, 1:02:17 GET
5/26/73

SC Break, break. What have you got for me on the probe. I'm scared we're going to get all this stuff in and not get the probe stuff where we can get in there.

CC Okay we've only got a couple items, Pete, and then Rusty has got some words for you on the probes.

SC Okay.

CC Okay on page 2-50 we don't want you to close the hatch channel. We'd like for that to read Don CHARCOAL MASS and then just place the hatch over the opening.

SC Okay.

CC And the last one is on page 2-60. On the circuit breaker configuration, panel 614, on the righthand side on duct 3 fans we want to keep all those open - the four duct 3 fan circuit breakers, we'll only use 8 fans.

SC That's affirm.

CC Okay and Rusty has got some words for you on the probe.

CC Okay Skylab we've got 3-1/2 minutes here left in the pass for your information and let me tell you what we want on the probe. There is a general caution note - I don't know who is going to do it - but when you collapse the probe for removal be aware of the fact that it may come completely free of the drogue right at that time.

SC Okay we are guessing that it will.

CC Right. That's what we're guessing also. Okay when you get up in there Pete what we're interested in finding out is what is the clocking of the center shaft latch on the aft end of the probe relative to the CSM axes. If you - what we're recognizing is pressing on with a normal probe removal checklist but before you do anything look at the flats on the center shaft and give us your orientation. And a good reference, by the way, is systems checklist page 2-10, gives you a look at the back end of that whole probe and you can reference the flats to that.

SC Okay. Now you don't want us to put the pyro cover back on with all the handles, huh?

CC Pete, we don't want it to go back on permanently at this time but if that helps to determine the orientation go ahead and do it, then take it off and then go through the rest of the probe collapsing and removal.

SC Okay.

CC Okay now -

SC Rusty, the picture I'm looking at has the cover on and I'm not sure I know what flats you're talking about?

CC Okay, Paul, the shaft - it's a circular shaft with a flat on each side and what we're recommending

in a way is if you can draw a perpendicular through those flats and then give us the clocking of that line with respect to the command module or that diagram on 2-10, either one.

SC All right.

CC Okay. Now the only other things we want, when you vent the probe, is when you press the button to bleed the nitrogen out keep watching that shaft and let us know if it rotates. There is a possibility that it may rotate 30 to 40 degrees. We don't think it will but we would like to know if it does.

SC Unfortunately we vented it last night.

CC You vented the probe itself or the tunnel?

SC No we checked the docking latched, by the way it made all 12 of them and in the process of doing that we went ahead and bled the probe. And I have the feeling that you're right. Joe said the probe was quite free in there after he bled it and I have the feeling that the whole probe is just loose in there and we do not have any capture latches.

CC Roger. If you did then all we can get from you is the clocking of the shaft before you - Okay we're going to have LOS in about 15 seconds. We'll pick it up GARBLE in about 1 minute.

CC Skylab Houston how do you read?

END OF TAPE

CC Skylab, Houston.
SC Go ahead.
CC Okay, we got about 5-1/2 more minutes now through Bermuda, and for your info, the med conference over Madrid has been scrubbed.
SC Okay, we're all healthy. And let's hear from Rusty some more on that probe. We didn't catch your last remark.
CC Okay.
CC All right. It sounds as though, since you've already vented the probe, that the thing we're looking for is the clocking on the center shaft, and other than that - and the caution about the probe being free, you're to press on with a normal probe removal as per the activation check.
SC All right. And what's your opinion on if we had to undock? How we'd go about doing it? Do you think we could get the capture latches to cock?
CC Okay, we're thinking about that, Pete, and we have a considerably longer procedure on verification of the probe capability, that will come later in the mission that'll answer that question specifically. One further comment on the probe removal, and that is: In your judgment you'll have to look at the back end of the probe, and if you feel that it's going to be safer removing it with the pyro cover back on, that is avoiding sharp edges, feel free to do so and let us know.
SC Okay. Stand by for the clocking. Pete's looking at it.
CC Roger.
SC Houston, Skylab.
CC Go ahead.
SC Okay, the line perpendicular to the flatch on that rod is rotated 15 degrees counterclockwise from the plus-Z axis as we view it. Or from the Z-axis, I should say.
CC Okay, understand. If you stand by just - 15 degrees counterclockwise from the Z-axis, and that's counterclockwise looking up at the probe from down in the command module?
SC That is correct.
SC (garble) talking about the removal (garble)
CC Roger. It has systems 2-10. Let me just verify. In other words, you're saying that the - that that line is essentially over the ratchet handle. By the extension of the line you just talked about, it's over the ratchet handle.
SC That's right (garble).

SL-1I MC-76/2
Time: 10:30 a.m. CDT, 1:02:30 GMT
5/26/73

CC Okay, fine. Thank you. We have it, and go ahead and proceed with the removal then.
SC Okay, but that now, Rusty, is the line perpendicular to the flat.
CC Roger; we understand. That's the line perpendicular to the flat. Thank you.
PAO Skylab Control, Houston. We've been listening to Backup Commander Rusty Schweickart chat with the crew about the probe. Presently sitting at the CAP COM's console - -
CC Skylab, Houston. We're about 40 seconds from LOS. We'll pick you up over Madrid at 40.
SC Return at 40.
SC Did you read comm check on that one?
CC Roger. We heard Houston's comm check; we read you loud and clear, thank you.
CC Copy.

END OF TAPE

SL-II MC-77/1
Time: 10:39 a.m. CDT, 1:02:39 GET
5/26/73

CC Skylab, Houston, through Madrid for 7 minutes.
SC Okay. We've got the probe out and the capture latches were not engaged.
CC Roger. Understand.
PAO That's CAP COM Henry Hartsfield speaking to the crew aboard Skylab on this Madrid acquisition, Paul Weitz responding to that call.
SC Okay, Houston. Here's a data plate for you, 2 capture latches are out and one capture latch is stuck in.
CC Roger. Copy.
SC Hey, Houston.
CC Go ahead.
SC Another data plate on that probe. It turned out that that one was squashed and the little ear, when I kicked it, it came up. It looks, to me, like 2 of them had captured and this one, for what ever re- you can tell better on the ground than I can. It would not come up and allow the little lever to trip and lock it. It looked like something was out of sequence with the trigger on that latch.
CC Roger. Copy.
SC Now. We've got all three capture latches latched and if I push on the end of the probe, it will release all three capture latches, they'll all fold and then pull them all down. Now let's push that up. Now let it go, they should all lock.
SC All down?
SC Yeah. Two of them are up and the third one is stuck down and I can't answer for you, why, and so is the little center button stuck down.
CC Pete, let me make sure I understand you. You went through your little sequence there, at one point you had all three capture latches out and you then tripped it again, and they went in and one of them stayed in and the button is - on the end of the probe is also staying depressed.
SC With me Rusty?
CC Pete, do you read?
SC Yeah, go ahead.
CC Yes. Did you read my summary there? Did it agree with what had happened?
SC No, I didn't read your summary, let me give it to you again. When we took the probe out, 2 latches were out and they were out, but appar - (loss of comm) - Push the plunger in the end of the probe - -
SC Capture latch released.

SC Capture catch released, but left side button, it sticks in now; and the one latch, capture latch stays flush and the other two pop up.

CC Okay, Pete. At one point you mentioned also, that the one that was flush, popped out when you kicked the trigger on it, is that correct?

SC Well, that's what I thought, but that's what's not doing it now.

SC Yes it is, too.

SC I take that back, it is. Paul just did it and it came up.

CC Okay. I'll tell you what, we're going to digest all that, Pete, and the boys in the backroom will be working and we'll probably come back to you at some later point. I suggest just going ahead with the time line.

CC And one further question. What's the status of the pyro cover? Did you put it on, or do you still have it off?

SC It's off.

CC Okay, fine. We'll assume it'll stay off, then and you're going to let us know where you stow it temporarily?

SC Yeah. We'll put the pyro cover in with the probe in the bag.

CC Okay, thanks.

CC Skylab, Houston. We're about 40 seconds from LOS. We'll pick you up again at Honeysuckle at 2.5.

SC Okay.

PAO Skylab Control, Houston, at 15 hours 52 minutes Greenwich mean time, our next station to acquire will be Honeysuckle. We're out of range, now with Madrid and that will be approximately 34 minutes from this time. This is Skylab Control, Houston.

END OF TAPE

PAO Skylab Control, Houston; 16 hours 4 minutes Greenwich mean time. During our Madrid pass, we had a momentary communications dropout. However, we have recovered the tape, and we'll play that tape for you now.

CC Yes. Did you read my summary there; did it agree with what had happened?

SC No, I didn't read your summary. Let me give it to you again. When we took the probe out, two latches were out. Add they were out, but apparently not locked. One was flush. Okay. Now, if we push the plunger in the end of the probe - -

SC Capture latch release - -

SC - - capture latch release left side, but it sticks in now, and the one latch, capture latch, stays flush, and the other two pop up.

PAO Skylab Control, Houston. That completes our tape playback.

END OF TAPE

PAO Skylab Control, Houston, at 16 hours 23 minutes Greenwich mean time, less than a minute away now from acquisition with Honeysuckle. The Skylab presently in an orbit of 239 nautical miles by 235 nautical miles. We will stand by to pick up conversation at that time when CAP COM, Henry Hartsfield, calls up the crew of Skylab.

CC Skylab, Houston, to Honeysuckle for about 9 minutes.

CC Skylab, Houston, to Honeysuckle for 9 minutes.

SC Roger, Houston. And be advised we had a MAIN A undervolt, which sucked the voltage down to about 25 volts, and it turns out to be a heater cycle, as best we can determine it. We must have had all the heaters on at one time. If you can look at your low bed rate, if you'd add that on, maybe you can come up with a better scheme for configuring these heaters for us. We just spent 10 minutes sorting that one out.

CC Roger.

SC And we've got about 5 minutes to go on the TDI sampling. We've gotten out sample and we're waiting the 15 minutes.

CC Roger; copy. And we got a couple of things for you too. It looks like we missed a couple of checklist changes here that we should have gotten.

SC Okay, hold it, and let me bring you up. We've got the secondary glycol evap dried out and the primary evap is on its way. Would you like E-memory dumped?

CC Stand by.

CC While we get set down here, we're - just for your information, we're going to do a CMG reset at 16:33 at about 6 minutes from now. Maximum excursion, we expect, is about 35 degrees in roll and 5 degrees each in pitch and yaw.

SC Okay. Go ahead with your checklist changes.

CC Okay, on page A-9, we had a comment earlier about whether you want to close the latch handle, the hatch handle, and that same comment applies there. On panel 312, we just want that to read to close the hatch.

SC Okay, just close the hatch; don't lock it, is what you're saying.

CC We don't - well, we had you closing the hatch handle then laying the hatch over on the dogs. We didn't want to do that, we just want to strick that out so it just says close the hatch.

SC Oh, okay.

CC But don't lock the hatch. And we're ready for the E-memory dump any time.

CC And the only other checklist change we got for you is on page 2-51.

SC Who's it for?
CC That's for the PLT.
SC Ready.
CC Okay, there on panel 390 in the aft lock activation, we want to turn heat exchanger pans 1 ON. And the reason we're doing that, Paul, is we want to stir up the air there prior to getting a sniff sample there.
SC The E-MOD's coming at you.
CC Roger.
SC Okay, Joe, you want the number 1 fan, or do you want them all on?
CC Just the number 1.
SC Okay. And we chose - like you to look at how we got that great big load on MAIN A because, as we remember at it, it just sort of kinda of took care of itself there. We were turning heaters on and off. But whatever heater cycle it was on, or maybe you'll see something on the data, but I'll tell you, we had one big load on that bus for a minute.
CC Roger. We'll take a look at it.
CC And, for info, our attitude plan is, after we do the CMG reset here at Honeysuckle - at Hawaii, we're going to command a small pitch maneuver to get a little more power in preparation for activation.
CC Roger.
SC And, Pete, we got one more probe question for you here in trying to psyche this one out.
SC Go ahead.
CC Okay. If the probe is not bagged yet, if you'll look, minus X along the probe and using the strut with the yellow end on it as a 12 o'clock reference, I wonder if you could give us the clocking of the capture latch which is sticking in.
SC Hey, Rusty, on page 2-11 is the one you can't see on that pi[redacted]
CC Okay, I've got it. And let me ask you another question. Have you rotated the head of the probe? Or do you think it's the same as it was for docking attempts?
SC We haven't touched that, and I'm sure it's the same. It's just the way we took it out of there.
CC Okay. Fine. So that's - looking in the direction, I was saying that's something like 7 or 8 o'clock.
SC I don't know. It's in the bag now.
CC Okay, fine. We've got it. Thank you.
SC (Garble), Houston.
CC Go ahead.
SC Okay, we passed the TDI monitor check with flying colors. It's pure white. Nothing that we could see at all.

CC Roger; copy. That's good news.

SC And we're on our way to the MDA. I wish I had a poloroid picture to send down to you guys from the inside of this command module with three suits, all that gear, a drogue, a probe, and a hatch, Joe, Paul, and Pete.

CC Roger. I'd like to see that myself.

SC It's unbelievable.

CC Okay, the CMG maneuver is coming up and we got the E-memory dump; you're cleared to do the power down now.

SC Okay, going to P06.

END OF TAPE

CC And, Pete, if you have the docking index angles available, we'd like to get those.

SC It's minus 1.5.

CC Roger; copy. Minus 1.5.

CC Skylab, Houston. We're about 15 seconds from LOS. Looking good going over the hill. We'll see you at Hawaii at 45.

SC Okay, we've done the E-Mode. The (garble) is deactive and (garble) proceed the MDA hatch opened.

CC Roger; copy.

SC Paul just went in, and he said it's very cold in there with the (garble).

CC 50 in there, I think.

SC Yeah, boy, and it looks great. He just turned on the lights.

PAO Skylab Control, Houston, at 16 hours 35 minutes ground elapsed time. We've just had loss of signal with Honeysuckle. Hawaii will be the next station to acquire. We heard the rather lengthy discussion over Honeysuckle with the crew aboard Skylab, Pete Conrad reporting the TDI sample tube completely white. At that point they proceeded to open the hatch to the multiple docking adapter. You heard the remarks that it was quite cold in there, in the order of 50 degrees. The lights in the multiple docking adapter apparently working. The main A undervolt, referred to as in the command service module, Conrad speculating that possibly a configuration of all the heaters on at once could have caused this. This data will be looked at on the ground. Meanwhile, as we approach Hawaii, a maneuver is planned to pitch the vehicle down 11 degrees to an attitude of 36 degrees, and this providing for a better electrical power system, which will be utilized in the course of the activation today. This pitch-down maneuver has been computed by the EGIL flight controller in the Mission Control Center, and the command will be given by the ASCO console. We're at 16 hours 37 minutes Greenwich mean time, and this is Skylab Control, Houston.

END OF TAPE

SL-II MC-K1/1
Time: 11:44 a.m. CDT, 1:03:44 GET
5/26/73

PAO Skylab Control Houston, at 16 hours 45 minutes Greenwich mean time approaching acquisition now with Hawaii. As we last saw the Skylab vehicle over Honeysuckle the multiple docking adapter hatch was just being opened and the pilot Paul Weitz was proceeding inside as the activation of the orbital workshop was at it's very beginning. Standing by now for acquisition.

CC Skylab, Houston to Hawaii for 9-1/2 minutes.

SC Okay Houston, we're in the MDA and we're pretty busy. I'm working on (garbie) and we're jumping around a little bit to try and clean up the command module because we got so much stuff in it. So we're moving the probe and drogue at this place. Be advised that nobody has had any trouble so far in the MDA. And be advised to tell the doctors that we did not in fact try our motion sickness pills this morning because none of us felt like we needed them.

CC Roger, copy.

SC Also we've got a window shade dump. And the command module is really beginning to pick up water on the inside of it I noticed. Our side hatch has got quite a bit of moisture on it and so do our windows. Just generally picking up moisture all over. But now that we've got this MDA dry air I think maybe that will help a little bit.

CC Roger, copy.

CC Skylab, Houston. The pitch maneuver's in work, should be about 11 degrees.

SC Okay, we're going to (garble) this up up here so you guys can maneuver away to your hearts content.

SC So far we've collected one screw, one nut, and one piece of red thread floating around in the MDA otherwise it's clean as a whistle. It's very nice.

CC Roger, copy.

PAO That's commander Pete Conrad reporting on the status of the multiple docking adapter inside.

PAO Skylab Control Houston, the Skylab crew now inside the multiple docking adapter as the activation process has started.

CC Skylab, Houston, whenever it's convenient we'd like to get a reading on the CL sample.

SC Okay, Houston, it was about 5 parts per million.

CC Roger, copy.

PAO Very little conversation with the crew at this time. Apparently preoccupied and busy as - as they start through their checklist.

CC Skylab, Houston, we're about 15 seconds from LOS. We'll be picking you up at Goldstone at 57.

SL-II MC-81/2
Time: 11:44 a.m. CDT, 1:03:44 GET
5.26.73

SC Okay Houston, the MDA Doc is in the command module and the suit circuit is deactivated.

CC Copy.

PAO Skylab Control Houston, we've had loss of signal with Hawaii. We should be picking up Goldstone in approximately 2 minutes.

END OF TAPE

SL-II MC-82/1
Time: 11:55 a.m. CDT, 1:03:55 GET
5/26/73

CC Skylab, Houston. Stateside for 5 minutes.
PAO Skylab Control, Houston, standing by now for acquisition there with Goldstone. The five parts per million CO referred to in that test is well within acceptable limits.
SC Roger, Houston, and we may be off the air here. We're going through umbilical connect crap and so forth.
CC Roger.
PAO Skylab Control, Houston, at 17 hours 2 minutes Greenwich mean time. A very little conversation with the crew as they're continuing through the checklist as the activation inside the multiple docking adapter continues.

END OF TAPE

SL-II MC-83/1
T+ 12:06 p.m. CDT, 1:04:06 GET
5/1 [illegible]3

PAO Skylab Control, Houston. We've just had loss of signal. Our next station to acquire will be Newfoundland.

PAO As the activation of multiple docking adapter proceeds, Commander Pete Conrad presumably is spending much of his time inside the command and service module, squaring things away at that point, while Kerwin and Weitz, we would expect, are mainly preoccupied with the MTA activities. We're at 17 hours 7 minutes ground - Greenwich mean time. This is Skylab Control, Houston.

CC Skylab, Houston through Bermuda for 7-½ minutes.

SC Okay, Houston. We're hooking up umbilical for SPS PT configuration check's been made; those guys are pressing on.

CC Roger, Copy.

PAO That was Commander Pete Conrad responding from the command module, stating that Kerwin and Weitz are pressing on.

PAO Henry Hartsfield, our CAP COM, here in Mission Control.

PAO Skylab Control, Houston, at 17 hours 13 minutes Greenwich mean time. About 2 minutes 45 seconds remaining on this pass over Bermuda. The activation of multiple docking adapter continuing with Kerwin and Weitz working inside. and meanwhile, Commander Pete Conrad remaining in the command and service module. We'll stand by and continue to monitor the conversation that takes place during this pass.

CC Skylab, Houston, we're about 1 minute to LOS. Be seeing you at Canaries at 17.

SC Roger, Houston.

CC Okay, no need to acknowledge. And for your info, we're playing back the data, now on the main A undervolt. We don't think it's a big problem at this point, but we are working on a plan. We'll have them for you later this morning and we may want to change some switches and bus setups in the command module.

SC Yeah, that's what we finally concluded - that it wasn't just sure we got too many heaters or some - -

PAO Skylab Control, Houston. We've had loss of signal with Bermuda. The next station to acquire is Canary in less than one minute. We'll stand by and continue to monitor. Meanwhile, the crew aboard Skylab continuing to press on through the activation, Weitz and Kerwin, presently in the multiple docking adapter; Pete Conrad communicating with the ground through the command and service module. It appears at this point, the Skylab Crew very much on their time line for the activation.

END OF TAPE

SL-II MCC4/1
Time: 12:17 p.m. CDT, 1:04:17 GET
5/26/73

PAO It appears at this point the Skylab crew very much on their time line for activation.
CC Skylab Houston through Canaries for about 15 minutes.
SC Okay, Houston.
PAO Skylab Control, Houston, at 17 hours 23 minutes Greenwich mean time. Almost no conversation with the crew during this pass. The crew most preoccupied at this point as they go through their checklist for activation.
PAO Skylab Control, Houston. The EGIL flight controller reports, looking at his data that the caution warning system is working in good shape aboard the MDA. Very little conversation over the flight director's loop at this point, controllers monitoring their consoles, watching data as it appears.
SC Hello.
CC Hello.
CC Skylab, Houston, you called?
PAO We heard the callup from Pete Conrad to conjecture here. He was -
CC Did you call?
PAO The conjecture here that he was trying to reach Weitz and Kerwin via the comm loop in the workshop.
SC Say Houston, Paul wanted me to tell you he's got a primary coolant temp low. Is that to be expected?
CC Standby 1. Roger that's expected. Temps are running real low down there in the MDA.
SC Okay the other thing is I've gone all the way through the complete hookup and includes panel 230 CSMs with (garble). It actually got in a barber pole and none of our SIA's need to talk to one another down there.
CC Roger, we copy. During one of those checkouts we heard someone say hello, hello there on the transmitter, I guess.
SC That was me, Jim, sitting on VOX 98. That doesn't count.
CC Okay.
CC Houston.
SC Go ahead.
CC Those SIAs aren't going to work until you get down to the page 233 there for the PLT where he puts the 8 audiocircuits in; closes those.
SC Okay.
PAO The SIA is the intercom system aboard the workshop.
SC We figured it was some place here.

SL-II MCC4/2
Time: 12:17 p.m. CDT, 1:04:17 GET
5/26/73

SC Hey, Brad, SPT is about to start ATM panel Y activation.

CC Roger, and I assume that all the items previous to that have been accomplished.

SC That's affirmative.

PAO That report from Skylab that the Science Pilot, Joe Kerwin getting ready to start the Apollo telescope mount activation, moving well along now into the time line. We presently show a Greenwich mean time of 17 hours 32 minutes. And 1 minute 45 seconds until loss of signal with Ascension.

CC Skylab Houston we're about a minute and a half from LOS. Next contact is Carnarvon at 01 and at Carnarvon we plan to uplink a test message to the teleprinter and when you get that you can take a look at it and tell us if it looks all right and then we'll be all set to send the pads and the rest of the uplinks.

SC Okay.

END OF TAPE

SL-II MC-85/1
Time: 12:33 p.m. CDT, 1:04:33 CET
5/26/73

SC How do you read from the MDA, Houston?
CC Okay, we're reading you, Paul. There's a little squeal in the background. Looks like you're getting some feedback from SIAs there.
SC Yeah. That was one of them. Okay.
CC Hey, you sounded real good then.
SC Roger. We're getting there.
SC PLT's on page 2-35.
CC Roger, copy.
SC The CDR's finishing up primary GLY ADAPT TRYOUT, and I'll (garble) where the glycol circ reads (garble).
CC Roger. Copy.
PAO We just heard from Pilot Paul Weitz, speaking through the intercom aboard the workshop.
SC Houston, Skylab.
CC Go ahead.
SC Never mind, we'll catch you later.
CC Okay. Well, I've got a few seconds to LOS.
PAO Skylab Control, Houston, at 17 hours 34 minutes Greenwich mean time. We've just had loss of signal on this Ascension pass. The next station to acquire will be Carnarvon, and at that time, from the Mission Control Center, we will do an initial checkout of the teleprinter system aboard Skylab. This is Skylab Control, Houston.

END OF TAPE

SL-II MC86/1
Time: 12:59 p.m. CDT, 1:04:59 GPT
5/26/73

PAO Skylab Control, Houston, at 1800 hours Greenwich mean time. We're standing by now for acquisition of signal over Carnarvon. We presently show the workshop in an orbit of 240.5 nautical miles by 234.2 nautical miles. During this Carnarvon pass we should have the initial checkout of the teleprinter aboard the workshop. We'll standby now and continue to monitor any conversations as they develop.

CC Skylab Houston through Carnarvon and Honeysuckle for about 10 minutes.

SC Roger, Houston. How do you read?

CC Roger, read you loud and clear.

SC GARBLE okay the CDR has completed the command module configuration through CM02 systems config and I just completed the caution and warning checkout on the GARBLE except for 392. And we're waiting right now to go into the lock and the OWS; we're configuring for that.

CC Roger and we do have things we'd like for you to set up in the command module. Are you up there now?

SC Yeah, but what do you want set up in the command module?

CC Okay we've looked at this heater problem; we think you've already powered down enough things that you're probably not going to get that undervolt again. However, we would like to go ahead and reconfigure the heaters. We were going to do it tonight anyhow but we'll go ahead and do it and then we'll be doubly sure that we probably won't get another undervolt, if you want to do that now.

SC Okay, if you'll wait 2 seconds I'll take you down into the command module and you can tell me what to do.

CC And Skylab for information we're going to command the fill valves closed according to flight plan.

SC Okay and I'm down in the command module now. Could you tell me what you want done?

CC Okay, panel 226; circuit breaker 02 fifty-watt heaters Main A, tow; MAIN A OPEN.

SC Was that two breakers?

CC That is tank 2, MAIN A.

SC Are you with us Houston?

CC Okay, we're in a hole right now between Carnarvon and Honeysuckle. How do you read?

SC You're right it was 251 OPEN, right, MAIN A?

CC Positive, tank 2 MAIN A OPEN. On 50 watt.

SC That's done.

CC Okay on panel 2.
SC Yeah.
CC Okay our H2 heaters, one, OFF. O2 heaters, one, OFF. And H2 fans, one, OFF and H2 fans, two, OFF.
CC Skylab how do you read me?
SC (static) are you going to (GARBLE) us 1? Hello, hello.
CC Skylab Houston we're in a key hole now. If you'll hang on a second or two.
SC GARBLE.
CC Okay, I think we're pretty good now, how about you?
CC Okay. On panel 2 that was H2 heaters, one; O2 heaters, one, OFF. That was two switches.
SC Okay, H2 heater, one, and O2 heater, one, are OFF.
CC Okay and H2 fans 1 and 2, OFF.
CC CDR did you copy that last on the H2 fans?
SC Where'd you disappear to that time?
CC I don't know. Did you get the H2 fans OFF?
SC I got the H2 fans OFF, yeah.
CC Okay. That's it.
SC Houston, SPT.
CC Go ahead.
SC Okay on the panel activation I suppose you know, but I want to be reassured that we have a power system alert light, a bat charger alert light, the battery and charger lights on CBRN 15 are ON and the - our charger - the bat charge bat volts and reg volts talkbacks are all barberpoled. Does that jive with the power problems that you've got?
CC That's affirmative. That all jives, Joe. We've lost that CBRM.
SC Okay and I did not connect the CBRM antenna because my assumption is we aren't going to use the - I don't mean CBRN or FNRBM, the noise burst monitor. Now I'm ready to do the DAS test if you are.
CC Okay standby the DAS test. We agree with the other things you said.
SC Glad you can understand them.
CC SPT, Houston.
CC SPT, Houston.
SC (Static) (Garble).
CC SPT, Houston. I'm reading you broken. We would like for you to go ahead and configure for the GARBLE. We are not going to use it. We'll correct that but we would like to get it connected up.

SL-II MC-87/1
Time: 1:22 p.m. CDT, 1:05:22 GET
5/26/73

CC Houston through Hawaii for 9 minutes.
SC Roger, Houston. Paul's down turning on the fans in the OWS at this time. Joe is monitoring him (garble) further word for you on that in just a minute. I can see Paul is on his way back up now.
CC Roger; copy.
PAO Hank Hartsfield talking to Skylab through Hawaii.
SC Your teleprinter message came through. It's kind of faded at the end. I hope they come through better than that.
CC Do you mean that all the message wasn't there, or it just printed rather weakly at the end?
SC It printed rather weakly at the end.
SC Okay, Paul is out. He's closing the (garble) lock hatch at this time.
CC Copy.
PAO Skylab Control, Houston. That's Paul Weitz who's taken off the airlock module aft hatch. Entered the orbital workshop and appears to have activated the fans.
CC Skylab, Houston. For information we're going to have to do another CMG reset here. Be coming up in a couple of minutes.
SC Okay, Houston. What's the problem? We've had two ACS malfs here in the last couple of minutes.
CC Well, the CMGs are saturated now (garble).
SC Okay, all right. Are you ready for the DAS test yet?
CC Roge..
SC Okay, here comes a (garble).
CC Skylab, Houston. We just want him to TACS on the control mode.
SC Did you do that?
CC Negative, I think it went out 20 degrees in attitude to cause it, and we'd like for you to stay off the DAS while we command the system.
SC Roger.
CC Skylab, Houston. We're about 1 minute from LOS. Goldstone coming up at 35.
SC Roger. Do you still want us to stay off the DAS?
CC Okay, you can clear the caution on your ACS malf, and we'll be standing by for Goldstone for the DAS checks.
SC Okay.
PAO Skylab Control, Houston. We're about a minute and a half away now from acquisition by Goldstone.

END OF TAPE

CC Skylab, Houston through Goldstone for 5 minutes.
SC Hello.
SC Hello, Houston, we hear you.
CC Okay. Read you loud and clear.
SC Hey, Houston; PLT.
CC PLT, go ahead.
SC Okay, on our very quick inspection, the OWS appears to be in good shape. It feels a little bit warm, as you might expect. From the 3 or to 5 minutes I spent in there, I would say, subjectively, it's about - it's a dry heat, I guess. It feels like 90 to a 100 degrees in the desert. Hank, I could feel heat radiating from all around me, but in the short time I was in there, I never felt uncomfortable. I had the soft shoes and the gloves on, and nothing I touched even felt hot to me.
CC Roger; copy.
PAO It's Paul Weitz giving his first - -
CC SPT, are you ready for those DAS tests?
SC That's affirmative.
SC Okay, I'm going to give you 10,000. Please acknowledge.
CC SPT, you got a GO on the first one.
SC Okay, here comes 20,000.
CC And, Paul, did you notice the duct flows when you turned the fans on downstairs?
SC If you want numbers, I didn't notice numbers. They came up to what I expected to be normal.
CC Okay; copy. And you have a GO on the second one, Joe.
SC Okay, and did I get this fuse thing going? Turned on eight fans down there.
SC You did want only eight fans turned on for this, right?
CC And, SPT, you got a GO on the third one. We wanted all twelve fans, but that's okay.
SC All right.
PAO We heard Paul Weitz's first assessment of the Workshop.
CC SPT, you got a GO on number 1.
CC SPT, GO on number 2.
PAO Meanwhile, Science Pilot, Joe Kerwin, making an initial checkout of the ATM digital computer.
CC A GO on number 3.
CC And you have a GO on number 4. All look good.
SC Okay, thank you. And, Hank, it looks as if CPRs 15 came off the line again. Is that right?
CC Roger; we concur. I think we still got troubles with it.
SC Okay.

SL-II MC-88/2
Time: 1:34 p.m. CDT, 01:05:34 GET
5/26/73

SC And by the way, Houston, this is SPT. I take it you didn't have any changes for me on page 2-38 for addition.

CC That's affirmative; no changes there. And if you want to clear that BATT VOLTS light, I guess you can turn the charger and reg off - -

SC Okay.

CC - - and number 15 there.

SC Okay, (garble).

CC And, Joe, while you're there, do you have any other talkbacks on the fire system that look like they might be out of kilter?

SC CDR says the fire detection system checked out 40.

CC Roger; copy.

CC Skylab, Houston. We're about 10 seconds from LOS; we'll pick you up again over Bermuda at 45.

END OF TAPE

SL-II MC-89/1
Time: 13:45 p.m. CDT; 1:05:45 GET
5/26/73

CC Skylab, Houston, through Mila for 10-1/2 minutes.
SC Gosh Houston, we're just (garble) your checklist here.
CC I didn't copy that last. Would you say again?
SC By gosh, we're just logging along on the checklist here and we're gonna (garble) TDI sampling in the OWS area after awhile.
CC Roger, copy and for - Joe if you are still at the ATM console, we would like for you to stay off the DAS. We're gonna - we think the reason that our momentum is building up is we're a little bit out of plane so we're gonna command a Z rotation.
SC Okay, you got it.
PAO This would be a pitch down of some 6 degrees; this maneuver coming up. ASCO will be the flight controller putting in the command.
PAO Skylab Control, Houston, at 18 hours and 48 minutes Greenwich mean time. We heard from commander Pete Conrad reporting that they're moving well along on the time line. Paul Weitz has been inside the workshop. He gave a very good description of the temperature inside.
CC Skylab to the CDR.
SC Houston, SPT.
CC Go SPT.
SPT Roger, I'm not sure if it's okay for me to go ahead with pages 2-42 and 2-43 or not with what you guys are doing.
CC Stand by.
CC Okay Joe, the DAS is yours and also we got a little message for the CDR.
SC Go ahead and I'll relay.
CC Okay, we goofed up a while ago and didn't beat the quiscent checklist against our power down on the panel 226, so next time Pete goes up there we'd like for him to go to 226 and turn 02 heater number 2, 100 watt, close the main B circuit breaker.
SC Okay.
PAO That last comment refers to the heater configuration aboard the command and service module.
SC Okay, Houston that was 100 watt 02 heater 2 MAIN B. Right?
CC That is affirmative.
SC It's on.
CC Thank you sir.
CC Skylab, Houston, we're about 1 minute from LOS. We'll be picking up Ascension at 02.

SL-II MC-89/2
Time: 13:43 p.m. CDT, 1:05:45 GET
5/26/73

PAO Skylab Control Houston, we've had loss of signal with Bermuda. Ascension will be acquired by Skylab in approximately 6 minutes. We're now at 18 hours 56 minutes Greenwich mean time, this is Skylab Control Houston.

END OF TAPE

SL-II MC90/1
Time: 1158 a.m. CDT, 1:05:58 GET
5/26/73

PAO Skylab Control, Houston, at 19 hours and 1 minute Greenwich mean time, less than a minute away now from acquisition through Ascension. This should be a long pass over the Ascension station, somewhere in excess of 10 minutes.

CC Skylab, Houston through Ascension for 11 minutes.

SC Roger, Houston; SPT. Over.

CC Roger. Go ahead.

SC Okay. In rolling the canister to unlock the GSE nitrogen purge fitting, the initial roll postion was minus 1440 instead of 1350 per the checklist. I thought about it and went ahead and did the procedure, and it appeared to work very well. I then deployed the scan spec mirror to the unlock position per the red line checklist. And looked at the DAS counter 2 scan spec mirror position; it read 6901, which is garbage. I just thought I'd pass that along for evaluation and reassurance.

CC Roger. Copy.

SC I think it's because I don't have the experiment powered up yet.

CC That is affirmative. That's the reason, Joe.

SC Okay, and I'm about to sample TDI through the aft hatch.

CC Roger. Copy.

PAO Joe Kerwin reporting he's getting ready to sample the TDI through the aft airlock module hatch.

CC Skylab, Houston. We're going to be starting a pitch maneuver here shortly to get you 6 degrees more into the Sun for power, and we'd like you to stay clear of the DAS.

CC Skylab, Houston. Did you copy, reference the DAS?

SC No. Say again.

CC Roger. We're going to be commanding a maneuver in pitch, and we'd like to keep the DAS free.

SC Okay, it is. Joe is in sampling the workshop air right now.

CC Roger. Copy.

SC CDR is taking out the launch pins for the film vault, and the PLT is in the midst of his - getting ready for water separator (garble) wetting.

CC Roger. Copy.

CC Skylab, Houston. The DAS is yours.

SC GARBLE.

PAO Skylab Control, Houston; 19 hours 7 minutes Greenwich mean time. Science Pilot Joe Kerwin has been into

SL-II MC90/2
Time: 1:58 p.m. CDT, 1:05:58 GET
5/26/73

the workshop taking samples. The crew moving well along in compliance with their time lines at this point.

END OF TAPE

SL-1/MC-91/1
Time: 2:00 p.m. CDT, 01:06:10 GET
5/26/73

CC Skylab, Houston.
CC Skylab, Houston.
CC Skylab, Houston. (static) and set it at 19:21. It's just past 19:21 and it looks like you're GO for (static).
CC Skylab, Houston.
PAO Skylab Control, Houston. We've just gone out of acquisition range with Ascension. The next station to acquire will be Carnarvon, some 22 minutes from this time. The last message passed by Henry Hartsfield, which may or may not have been heard by the crew, was a request to command reset for a roll maneuver. Since we have been experiencing some drift in attitudes, and to do this via the control moment gyros versus the attitude thrusters would be highly desirable from the mission point-of-view. We're at 19 hours 14 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TAPE

SL-II MC-92/1
Time: 2:26 p.m. CDT, 01:06:25 GET
5/26/73

PAO Skylab Control, Houston, at 19 hours 26 minutes Greenwich mean time, and 2:25 p.m. central daylight time. One point of clarification, when Paul Weitz first entered the orbital workshop, he was wearing a mask and was observed by Science Pilot, Joe Kerwin, during this time, through the hatch while he, too, was wearing a mask. The TDI CO sampling, which was done following this, took place through the aft airlock module hatch with no crewmember inside the orbital workshop. This is Skylab Control, Houston.

END OF TAPE

SL-II MC-93/1
Time: 2:34 p.m. CDT, 01:06:34 GET
5/25/73

PAO This is Skylab Control at 19:34 Greenwich mean time, 30 seconds out from the Carnarvon, Australia, Tracking Station. A pass that will last about 10 minutes and 40 seconds. A short hop across West Irian and to the Guam tracking coverage. We should have acquisition at this time; we'll stand by for CAP COM's call.

SC Skylab, Houston through Carnarvon for 10 minutes.

CC Skylab, Houston. Do you have anything to report on the TDI sniff?

SC It's cooking. It's time (garble), Houston, and so far it doesn't look like anything, but we'll let it run its full (garble).

CC Roger; copy. And for the SPT, we just dug out some info and learned that the canister was launched with a roll of 14 30. So the reading he got was right on the money.

SC Okay. He's nodding his head, and if you're looking at the data, you may have just seen a note to (garble) the command module. We activated the water system again so that we could get some chow.

CC Roger; copy. And to help our pyro situation, I guess we'd like to get the OWS entry lights turned off there in the aft lock here while we're eating lunch - after you complete the sniff.

SC Okay, we'll get that as soon as we're done testing for TDI. I though I turned them off when I came out, Hank.

CC Okay, you may have. Yeah, he did.

SC If you think I'm not power conscious here, I thought I'd thought about it, and you guys caught me. And I have something else for you on the corner space tank dump system. (Garble) heaters when you're ready to listen.

CC Okay, go ahead.

SC Turn to rrocedure on page - wait until I find the page.

CC And we'd like for you to keep clear of the DAS for the next few minutes.

SC I'm within 3 feet of it. That won't hurt it, will it?

CC That'll be safe enough.

SC On page 119, Henry, he's preping for this - You ready to listen to me? You were talking about something else to somebody else.

CC Go ahead.

SC Okay. Anyway, apparently, on our corner space tank, it appears that the secondary vent heater did not work. I turned it on, and the light came on, and I came back

and checked it about 20 minutes later. The temperature was reading zero. I cycled the circuit breaker. The light went out and came back on. I went to primary, and afterwhile its temperature came right on up. So I went ahead and did that dump, using the primary system. You might think about it and see what other readings you have on the ground, if any, and let us know.

CC Roger; we copy.

SC Also, I don't know, but I turned that heater off about 10 minutes ago, after having dumped through it, and the temperature is still pegged high, in excess of 150.

CC Roger; we copy.

CC Skylab, the DAS is yours.

CC Skylab, Houston. For info, we're going to be sending up via teleprint, hopefully prior to the stateside pass, some mod's to the parasol deployment checklist; so you'll have time to browse them over before you have to do it.

SC Okay.

CC Skylab, Houston. One minute to LOS; Guam at 49.

SC Okay. S-and by for the TDI results.

CC Okay.

SC TDI level's okay. There's no discernable change in color.

CC Roger; copy. That's good news.

SC Smells kind of funny in there, though. Smells like hot metal for some reason.

CC Roger.

SC Or it's from this vent on.

CC Smell anything like butterscotch oudding?

PAO This is Skylab Control. We've had loss of signal through the Carnarvon, Australia, Tracking Station. About 2-1/2 minutes to Guam. We'll leave this circuit up for that small jump across to the Guam station. At 19:46 Zulu and standing by, this is Skylab Control.

END OF TAPE

SL-II MC94/1
Time: 2:47 p.m. CDT, 1:06:47 GET
5/26/73

CC Skylab, Houston through Guam for 9 minutes.
SC Roger, Houston.
SC Roger. We'll have some (garble) results for you in a couple or 3 minutes.
CC Okay. Standing by.
SC Hello, Houston.
CC Roger. Go ahead.
SC Okay. No detectable CO, according to our tester in the workshop.
CC Roger. Copy.
SC We're going to close the hatch again and eagerly awaiting your GO for entry.
CC Roger.
SC You want me to turn on those other three spare, other four fans, Hank, or just let her run on eight.
CC Stand by 1.
CC Okay, Paul. We'd like to just leave it like it is now, and you can turn out the lights and go on about your business.
SC Okay. That's complete; the lights are out, and Joe's securing the airlock aft hatch, right now.
SC And we're going to leave the airlock forward hatch open. Consider the airlock is - the walk compartment of the airlock is usable and livable.
CC Roger. We concur.
SC Hey, Henry. I've got one more question for the ECS guys.
CC Okay. Go ahead.
SC O'ay. I don't want to waste going through one of these water separator plate wetting deals. The dewpoint right now is 36 degrees. Is it going to do me any good to wet the plates now and put them in?
CC Stand by 1.
SC Okay.

END OF TAPE

SL-II MC-93/1
Time: 2:53 p.m. CDT, 1:06:55 GET
5/26/73

CC Standby one.
SC Okay.
CC Skylab, Houston. For Paul - well we'll go ahead and delay doing that right now. Looks like it's going to be quite awhile before we need the things. If it turns out that we do need them, it looks like the SPT may have some free time later to say it.
SC Yeah, okay. That's just a rather lengthy procedure and I didn't want to waste time doing it twice, that's all Hank.
CC Okay, and we got about 1 minute to LOS so we'll be coming up at Goldstone at 14.
SC Roger.
SC (garble) around here. Hey, something else for them to think about is since we got a late start we got about 2 hours and 45 minutes left to go in the bake out of bed 1. You ought to ask Vick what they want to do about bake out of bed 2.
CC Roger, copy.
SC Well, why don't we do it tonight or put it off until tomorrow morning on that one?
PAO This is Skylab Control. 19:59 Greenwich mean time. Loss of signal out of the Guam station. 14 minutes and a half until acquisition at Goldstone station in the Mojave Desert in California and a fairly lengthy stateside pass through most of the stations. During this just completed pass over Guam, Paul Weitz reported that there has been no change in the TDI level in the workshop. The sensor still came out white. He did comment that it smells like hot metal. OWS pressure holding now at 5.1 pounds. Weitz also reported that there's no detectable carbon monoxide in the workshop. And as they prepare for their lunch meal the crew will close off the workshop but consider the airlock module as a habitable area for the time being until activation of the workshop itself is complete. Currently the Skylab cluster is in an orbit measuring 235.1 nautical miles at Perigee, and 239.2 nautical miles at Apogee. Orbital period 1 hour 33 minutes and 22 seconds. At 20:01 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-96/1
Time: 15:13 p.m. CDT, 1:07:13 GET
5/26/73

PAO This is Skylab Control; 20:13 Greenwich mean time, which translates out to 3:13 central daylight time; 44 seconds now from a good solid state-side pass. We've got a LOS, now.

CC That's affirmative. It looks like you ought to be coming right up, or near, Seattle.

SC Okay. Mr. Weitz just recognized the world?

SC Oh yeah. And we'd like you to pass along to the Principal Investigator of ah - -

SC Pardon me, (chuckle) to Don Lind, that his experiment is in super shape.

CC Roger; copy.

SC We can see it out the window.

CC Skylab, Houston (garble) you notice any lights changing down on your CBRMs. We're managing 5 and 6. Because of the attitude, we're having trouble getting the batteries charged. So, we're just kinda switching them around. So, that would explain any lights that you see on those 2.

SC Roger, Houston.

SC Say, Houston, you with us?

CC That's affirmative.

SC We're getting ready to eat lunch. Waiting for your GO to go on into the workshop and it's my - contamination goes on any one of these 4 STS windows. They are just as clean as a whistle. They're as clean windows as I've ever seen in a spacecraft.

CC Roger; copy.

CC CDR, Houston. You're GO for entering OWS and the modifications of procedure should be coming up shortly.

SC Okay. We're going to go eat. It's kinda hard to get away from the windows, especially for the new boys.

CC Roger.

SC The Pacific Northwest is really something. Right now, we're over what appears to be a fairly major weather system with pretty good overcast clouds in the Montana, Dakotas region.

CC Roger; copy.

CC And for info, we're also going to be doing another CMG reset at 2:08, a nominal (garble).

SC Roger. We'll wait for all the clang, bang and the bells to ring.

SC Also, Hank, not having spent any great time at 237 nautical miles, why we passed some familiar landmarks like NAS Whimpy and a couple of other airfields. And we can see those runways pretty good. So, hopefully we'll do pretty

good with our REEP.

CC Hey, sounds great.

CC Skylab, Houston. May we assume that all activities other than separator plate servicing has been accomplished, all activities prior to lunch?

SC Yeah, that's ah - that's affirmative. We elected not to (garble). We looked at them and they're not that bad.

CC Roger; copy.

SC Be advised now that we have a moment to chat. Mobility around here is super. It's turned out to work better than I say, than we even hoped for. Nobody has had any problem with any feeling of any motion sickness or anything, so we're all squared away on that. Everything that we've been supposed to unfold or move or (garble) has been easier than we could hope for.

CC Roger. That's good news. How's (garble)?

SC (Garble) the parasol deploys.

SC Pete, told them about the one operation that wasn't any easier.

SC (Garble).

END OF TAPE

SL-II MC-97/1
Time: 3:23 p.m. CDT; 1:07:23 GET
5/26/73

SC Pete, tell them about the one operation; it wasn't any easier.

SC Yes, the doctor wanted me to remind you, though, that the one operation that has not changed in the history of manned space flight was just performed by a CDR, and, as usual, its backup (garble) it takes approximately 1 (garble).

CC (Laughter) Roger; copy.

SC (garble) and we just passed Florida, as I'm sure you know. And that we were able to make out - the (garble) Cape and from there we could all (garble) could not actually see the buildings. Do you see the cleared area around the VAB? Do you see the (garble) way out to the pads, both pads, and also make out quite distinctly the (garble).

CC Wow, must be pretty down there today.

SC It looks like they get some super big boomers in Miami, and that's just right to the Cape, too.

CC Roger. In fact, one of them must have got us, because we are having a little trouble with our command lines. That teleprinter message on the procedure change may be a little late getting up to you. However, there are no changes, at least up to step 5.

SC Okay, good enough. Gosh, something's coming in now.

CC Okay, the step 5 was in the parasol deployment.

SC That looks like black magic - that stuff coming out of that teleprinter.

CC Skylab, Houston. For info, we'll be dumping the data recorded over Bermuda, which is just a couple of minutes from now.

SC Okay, and as I remember, the cue cards for the (garble) deployment are in the back of the rendezvous book. Is that right?

CC Stand by.

CC That's a correct location. Back of the rendezvous book.

SC Okay, thank you.

SC Hey, Hank, you with us?

CC Roger.

SC Okay, I rewound the video tape recorder. It took about 3 minutes and 20 seconds for it to rewind. That's all configured for you.

CC Roger, thank you.

CC Skylab, Houston. Teleprinter load should be up to you now, and you look those over. If you got any comments, you can give them back to us. We got about 1 minute left on this pass.

SL-II MC-97/2
Time: 3:23 p.m. CDT, 1:07:23 GET
5/26/73

SC Okay, Houston, I've got them in hand, and the teleprinter does a very nice job, except it's awfully faint.

SC We don't know whether it's this particular paper or whether that's the way it's going to be the rest of the time. (garble) difficult to read.

CC You can read it all, can't you, Pete?

SC I think so, Hank.

SC Okay, we're just short of LOS. And our next contact is going to be Carnarvon at 13, which is a long time from now, and we'll be dumping the recorder there again.

SC Okay, hopefully we'll have had lunch by then, and we'll work these changes while we're doing lunch.

CC Okay.

PAO This is Skylab Control. We've had loss of signal apparently. The station is in the eastern test range. Next station Carnarvon in 39 minutes. During the just completed stateside pass, the commander reported that he could see runways on airfields across the northern United States. And commented that, hopefully, we'll do pretty well with EREP, referring to the earth resources experiment package, which does multispectral scanning and photography of Earth features. He also commented that the mobility in zero-g, going back and forth along the multiple docking adapter and airlock to the CSM and performing their activation chores, he commented that the mobility is super. Coming across Florida they reported seeing features at Kennedy Space Center, the cleared area around the vehicle assembly building. Conrad also brought up the fact that the Skylab windows were as clean as any he'd ever seen in any spacecraft. And looking up toward the telescope mount truss, he mentioned that the - that Don Lend's experiment was in super shape. This refers to Astronaut Don Lend, who is also a co-investigator on experiment number S230, magnetospheric particle composition experiment. His co-investigator is Dr. Johannes Guiss of the University of Berne in Switzerland. The detector is mounted on the ATM strut, with a cuff over it. And the detectors will be brought in during the EVA in which the ATM film canisters are retrieved. Crew presently is having a lunch meal, and they should be well into preparations for deploying the parasol during the next stateside pass, which is still another hour and 15 minutes away, when we come across Goldstone. Next station to acquire will be Carnarvon in 36 minutes, followed by Guam, with a slight gap between the two stations. At 20:36 Greenwich mean time, 3:36 central time, this is Skylab Control.

END OF TAPE

SL-II MC98/1
Time: 16:12 p.m. CDT, 1108:12 GET
9/26/73

PAO This is Skylab Control; 21 hours 12 minutes Greenwich mean time. We have acquisition at Carnarvon. This Carnarvon pass lasts almost 10 minutes. Flight Director Neil Hutchinson has been going over the procedures for deploying the parasol device to understand in his mind, how the thing works, how the rods are attached one at a time and pushed out with retainer knobs attached.

CC Carnarvon for 7 minutes and we'll be dumping the recorder.

SC Roger. Okay. The CDR's headed into the workshop right now with duals ahead trying to (garble).

CC Roger; copy. And the next guy through the airlock there we'd like to get him to turn OWS heat exchange fans number one off. We don't need that anymore and we'll conserve a little power.

CC Skylab, Houston. Did you have any questions on the mods we sent up by teleprinter?

SC I just finished incorporating them in the cue card, Hank. We haven't really had the time to go over and review them. We'll do that later.

CC Okay. And ah - For the SPT there, he's to set up the TV. We'd like to give you some words on order of priority. The number 1 priority is, that he be able to observe the deployment. If the TV camera's going to interfere with his observation, then eyeballs come first.

SC Roger. This morning is the first time I had an inkling you guys wanted to see this and I just haven't thought about it, yet.

CC Okay. It's called out there on our page A-4 in the time line.

SC Yeah, which I saw this morning for the first time.

SC Say, Hank. There's one whale of a lot of stuff in that command module. And we ll see if we can get it out.

CC Okay.

SC Because in order to neaten it up to leave room for three guys, among other things, we had to dismantle the TV and restow it. In order to get it out, we are going to have to move a whole lot of other stuff.

SC We'll try to do it, but we're not promising anything, is what I'm saying, I guess.

CC Okay. That's good, but before you try it, take a look out the window and see if you think you're still going to be able to see if the TV camera is installed.

SC Ahhh yeah, well, oh I see your side yeah.

CC Well, the number 1 priority is being able to see it with your eyballs, and if the camera interferes we don't want the camera.

SL-II MC98/2
Time: 16:12 p.m. CDT, I108:12 GET
5/26/73-1

SC You cannot see out that window with the TV camera in there.
SC I tried that yesterday and I coudn't see and I didn't get any TV by trying to do both.
CC Okay; copy.
CC I guess, if it's feasible, what we'd like to do is have you eyeball the deployment and after it's deployed give us a TV picture of it.
SC Understand you.
CC Skylab, Houston. We're about 30 seconds from LOS. We'll be coming up on Guam at 27.
SC Roger, Houston.
PAO This is Skylab Control; 21:22 Greenwich mean time, in a gap now between Carnarvon Tracking Station and the Guam Island Tracking Station in the western Pacific. Some discussion over Carnarvon on deployment of the parasol through the solar scientific airlock. It was mentioned that TV would be desirable through the command module window as the parasol is extended up above the workshop wall. However, the eyeball observation was prime. TV would be nice, but not to let it interfere with Kerwin's visual observation of the parasol. However, it was mentioned that after it was successfully deployed, it would be highly desirable to have a television picture. The parasol that is being carried was the brain-child of Jack Kinzler, who is Chief of the Technical Services Division at Johnson Space Center. The hardware for the parasol, all of the telescoping tubing up, and all of the deployment mechanism adapted to the TO-27 canister were all built in the Tex Services Machine Shop. The parasol canopy was also constructed here at Johnson Space Center. During all of the testing and modification period, the test teams worked around the clock. Most of the testing was headed up by Don Arabian. The poles work, rather like collapsable tent poles, in that they're aluminum poles or tubing of descending diameters to telescope inside each other with snap tabs at the end that prevent them from pulling out. springs around the top hub will force the four diagonal poles outward after they clear the end of the canister and the wall of the workshop and bring the canopy out flat after some amount of flapping around until it damps out. Parasol canopy was packed late Thursday in the HIGH-BAY AREA of the Space Environment Test Division, building 32. And was packed with all the care of a parachutte. In fact, parachutte riggers did most of the actual packing and folding down to a package small enough to fit into the 8 by 8 inch square canister, which is some 53 inches long inside. Teflon sleeves, then sheets of Teflon on the 4 sides of the canister - -

END OF TAPE

PAO - which is some 53 inches long inside. Teflon sleeves, thin sheets of Teflon on the four sides of the canister, will aid in allowing the canopy to slide outward. The Teflon will act as a lubricant. We're less than a minute away now from Guam station. We'll leave the circuit up for the Guam pass. And we're 25 minutes out of Goldstone. This is Skylab Control standing by.

CC Skylab, Houston through Guam for 8 minutes.

SC Roger, Houston. This is the SPT. (garble) The other two guys are in the workshop getting ready for parasol deployment.

CC Roger; copy. And, for your information, we'll be switching the mission timer from B to A according to the Flight Plan.

CC Skylab for the SPT.

SC Go ahead.

CC Okay. Are you up in the STS or ATM panel now?

SC I'm moving now, but I can get there (GARBLE.)

CC You're picking up a lot of feedback through the SIAs, Joe. I'm having trouble reading you - loud squeal.

SC I know. I had my hands full of (garble). I had to use the wrong VOX. Go ahead.

CC Oh, okay. Sometime when you get a break there, we'd like for you to take a look at the Calfax fasteners on the teleprinter print cartridge and see if they are tied. I don't know whether that's - I can't imagine them not being tied, but it's one thing we couldn't check.

SC Standby. They're all tied, Hank.

CC Okay, thank you.

CC Skylab, Houston. For info, we're initializing a shutdown.

SC Roger.

CC Skylab, Houston. The DAS is yours.

CC Skylab, Houston. For information, we're commanding a (garble).

SC Roger.

CC Skylab, Houston. We're about 15 seconds from LOS. Goldstone at 51.

PAO This is Skylab Control, 21:35 Greenwich mean time. And we have gone out of range over the hill from the Guam Island tracking station; 15 minutes now until Goldstone in California. Crew at this time making preparations for attaching the canister containing the Skylab parasol to

the solar airlock (scientific airlock), a rather tedious job of extending the parasol, attaching one section of rod at a time to the central core rod, the main shaft of the parasol. This main shaft is actually part of the hardware for the T027 experiment, and the parasol four diagonal ribs and central hub were simply attached to the existing experiment hardware. The outer ends of the telescoping ribs are attached by screws to the inner plate, end plate, of the canister, and as the canopy is fully extended by successive attachments of rods, much like going down in a hole with drill stem in an oil well, the four screws will be released at the end plate, allowing the ends of the rods to pass on out through the canister past the wall of the workshop and rotate 90 degrees into the four corners, taking the folded parasol canopy with it. At 21:37, up again at Goldstone in 13 minutes, this is Skylab Control.

END OF TAPE

SL-II MC-100/1
Time: 16:48 p.m. CDT, 1:08:48 GET
5/25/73

PAO This is Skylab Control. 21:48 Greenwich mean time, 4:48 Central daylight time. Acquisition at Goldstone in 2 minutes 25 seconds. Crew still at this time making preparations for deploying the Skylab parasol. They first have to move a water tank from the floor of the workshop up to it's permanent resting place lashed down up in the - near the dome. During this stateside pass the final discussion of the changes in the deployment procedure for the parasol will be carried out. Just one more stateside pass after this one. And then we are pretty much on the back side of the orbit which takes us through the Hawaii station and Vanguard for several REVs before we start coming back on the main part of the network. Less than a minute now to Goldstone. We'll standby for the initial call from the spacecraft communicator Hank Hartsfield. Standing by at 21:50 Greenwich time, this is Skylab Control.

CC Skylab, Houston to Goldstone and stateside for 15 minutes.

SC Roger Houston. We have had what we consider to be 3 false alarms from BUS 1 fire detector in the center sleep compartment. And in all(garble) instances, they were transient, lasting less than two seconds. However, the first time it does give you a start. And for right now we got Bus 1 powered off on that detector.

CC Okay. Would you say again the location?

SC The detector in the center sleep compartment. Sleep compartment number 2.

SC Roger, copy.

SC Work is progressing. We've relocated the (garble) holding tank, and that went like a piece of cake, just like two thousand and in one. We've done the tripod move. We got the foil off the SAL. It is in good condition we're in a process of moving the TO27 down now, while Joe hunts for the (garble) bags.

CC Roger, copy.

CC Skylab, Houston. Paul, we're having to manage this momentum and do maneuvers here pretty often as you know and we feel that we can't afford to have a maneuver while you're pushing this thing out. Now you can work all the way up to step 22A, but we'd kind of like to a feel for, later on in the pass here. We got about 12 more minutes. About when are you going to get to that so we can manage the momentum?

SC Okay, Hank. Paul heard that and tells me that they don't have a field yet for what they are going to be at that - We'll let you know.

CC Okay, I just wanted to make you aware. I knew you wouldn't know at this point. But as you start working along maybe you can get an idea about when it will be.

SC You bet.

CC Skylab, Houston. We'd like to verify that - that you have read the procedure and don't have any questions about it because we're starting to come up on the time of day when we don't have many station contacts. In fact, after we drop out stateside here, we'll pick you up at Vanguard in about 20 minutes and that's the last pass before Goldstone.

SC Okay, I'll pass that word to the workshop Hank. How many minutes left on this pass?

CC Okay, we got 10 minutes here.

SC Okay.

END OF TAPE

SL-II MC-101/1
Time: 4:56 p.m. CDT, 01:08:56 GET
5/26/73

CC Skylab, Houston. For information, we'll be commanding the spectrometer on the CSM; no action required.
SC How do you read, Houston?
CC Roger; I'm reading you loud and clear, Pete.
SC Okay, I got you on the speaker box (garble). I got one of my hot gloves back on again. The speaker box is about 130. We're taking the tape off the box and we're taking our time right now, and if we have any questions on the procedures, we will wait to ask you.
CC Roger; copy.
SC It occurs to me, the question I had was why did you want to reverse the sleeves on the SAL tripod?
CC Say again, please?
SC On the SAL tripod, why did you reverse the speed on it? You know, I just couldn't figure out why (garble).
CC That's the screws that - the way the thing is mounted there for launch, Pete, you know, you turn those around, as part of activation.
CC SPT, Houston.
SC He's down in the workshop.
CC Okay. SPT, just give us a call when you're free for a minute.
SC Can I relay you, Hank?
CC Negative. I just got a little pass we want him to perform here sometime when he's free, and I need to read it to him whenever he's got a chance to listen.
SC Okay.
CC Skylab, Houston. For information, no action required, we're going to do another nominal H-cage in about 2 minutes.
SC Okay.
CC Skylab, Houston. Is one of the guys near the ATM console?
SC No, we're all in the OWS.
CC Okay. We're just trying to verify here. We saw a change of status on the CBRM's. We're managing 5 and 6. Now, we're about a minute from LOS now. We'll be picking you up at Vanguard at 17.
SC Okay.
CC And the reset are the nominal H-cage should be starting now.
SC How many minutes until sunset?
CC Okay, sunset's coming up in 13 minutes.
SC Sure gets hot down here on the stateside pass, and the other thing is when that TACS goes off, it sounds like somebody's beating on the bottom of the lab with a hammer.
CC Roger.
PAO This is Skylab Control at 22:06 Greenwich mean time, 5:06 central daylight. Ten minutes to Vanguard Tracking Station. Apparently we have had loss of signal through Mila, a tracking station near Kennedy Space Center

SL-II MC-101/2
Time: 4:56 p.m. CDT, 01:08:56 GET
5/26/73

in Florida. Pete Conrad commented that during this last pass, that moving the water tank from the floor of the workshop up onto the wall, was a "piece of cake". And just a few moments ago, he said that any time the TACS system, or thruster attitude control system fired, it sounds like someone pounding on the workshop with a hammer. We'll bring the line up again at Vanguard in about 9 minutes. At 22:07 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC102/1
Time: 17:15 p.m. CDT, 1:09:15 GET
5/26/73

PAO This is Skylab Control, 22:15 Greenwich mean time. Little over a minute out from the Vanguard Tracking Ship for the first pass over that tracking vessel this evening. Three successive - four successive passes, 177 178, 179. After Vanguard, it's long dry spell until we hit the States again now; almost a complete revolution. We should have a status report from the crew during the Vanguard pass on how the work in preparing the Skylab parasol is proceeding. We'll stand by for spacecraft communicator Hank Hartsfield's first call. 22:16 Greenwich mean time, standing by, this is Skylab Control.

CDR Houston, you read?

CC Roger, read you loud and clear. We're through Vanguard for about 8 minutes.

CDR Okay, Houston. Damn it. Between steps 6 and 7 you didn't verify bottom. Teflon flaps is innermost and top is out. And unfortunately, the forward flaps run vertically. Now, do you mean the flaps that are inside, the two vertical running flaps? There are 4 flaps there. If you hadn't sent us the change, we'd understood it.

CC Okay. The way that's suppose to be, is the bottom flaps should be folded upwards, then the two side flaps folded across, and then the last flap on top shou'd be folded down.

CDR Okay. That means we have to refold it. Do you understand that?

CC Right. The purpose of that, Pete, is to keep the SAL door, when it pushes in and down from pulling that flap down.

CDR Okay. I'm not arguing with you, I'm telling you we have to change it. Is that what you expected us to have to do, change it?

CC Negative, we did not expect that.

CDR Because it's not packed that way. You want us to hold while you verify or do you want us to change it? I understand what you're talking about.

CC We want it changed, Pete. We want it so that the SAL door will not drag the flap down. So, that top flap has to be on the outside folded down.

CDR Top flap folded down. You will have.

CC That's the thing we uncovered last night, Pete, when we were working in the trainer. The - When they packed it, we didn't know about that problem with the SAL door.

CDR Yeah, I understand that, I just wanted you to understand that we were going to have to rearrange those

flaps because it was not packed the way you described it to start with.

CC Okay. We did that in the trainer. That's easy to do.

CDR Okay.

CC Skylab, Houston. For your info on the maneuver, we're doing a pitch maneuver now to pick up the power situation. We shouldn't have to do that again while we're deploying. Our next nominal H-cage is going to have to be done at 23:39 over Texas, which is on the next contact after Vanguard. So, the only constraint we have on you is that we cannot be maneuvering while you're doing steps 33 to 35 and that is when you actually deploy the parasol. So, if you reach that point in the checklist and it looks like it's getting close to the time we're going to have to do that reset, we're going to have to hold up until we get it completed.

CDR We understand that. But we need your steps at the time, so we can write it down. It was 34 and 35 and when are we over Texas?

CC Okay. Over Texas at 23:39, that's when we have to do a re - nominal H-cage. And the steps were 33, 34, and 35. That's when you do the last little push to deploy the parasol.

CDR Okay.

CC Skylab, Houston. We're about 20 seconds to LOS. We'll be picking you up at Goldstone at 28. And ah - we show you coming up close to termination of bed-1 bake-out, we want to delay bed 2.

CDR Say again about bed-1 bake-out, Hank.

CC Roger. According to our time, it's just about through and we want to delay number 2.

CDR Okay.

PAO This is Skylab Control. We've had loss of signal from tracking ship Vanguard. The Skylab cluster now over the South Atlantic an hour and 2 minutes out of Goldstone; almost a complete rev before the next station pass. We're proceeding quite well on preparing the Skylab parasol for deployment. The Teflon flaps, which are the ends, actually, of long sheets of Teflon on the four sides of the canister, are being repacked so that the upper flap is downward to avoid any binding with the opening of the airlock - scientific airlock door; a fairly minor operation. It was checked out in a trainer last night and found to be the best way to avoid any possible difficulties. At 22:26 Greenwich mean time, up again in 1 hour and 1 minute, this is Skylab Control.

END OF TAPE

SL-II MC-103/1
Time: 18:18 p.m. CDT, 1:10:18 GET
5/26/73

PAO This is Skylab Control, 23:18 Greenwich mean time. Slightly over 9 minutes to acquisition on the final stateside pass of the day. Pickup at Goldstone and just sliced through the western edge of the Texas circle. Flight controllers here in the control room are taking advantage of this long LOS period to drag out brown-bags and go down to the snack bar and other places in the building and in general, stretch their legs. After Goldstone and Texas we have about 3 or 4 successive passes at the lower end of the descending node, passing through the Vanguard tracking ship acquisition range. Orbit continuing to precess westward during this time of the day off the range coming back on to it in the early morning. During the upcoming stateside pass we should get a fairly good estimate or evaluation by the crew on how they stand with the deployment of the Skylab parasol. At least verbal descriptions and if they've found the time to take the effort to unstow the television camera, hopefully a picture. Up again in 7-1/2 minutes with Goldstone acquisition. At 23:20 Greenwich mean this is Skylab Control.

END OF TAPE

SL-II MC-104/1
Time: 18:26 CDT 1:10:26 GET
5/26/73

PAO This is Skylab Control 23 hours 26 minutes Greenwich mean time, slightly over a minute until acquisition through Goldstone and a small slice of the Texas station. Flight Director Neil Hutchinson went on the flight director loop and asked everyone to settle down after this long LOS period, sit down and settle down. Everyone anticipating and hoping for a successful Skylab parasol deployment, either completed or near completion. They will leave the air-to-ground line up to catch the first call as we have acquisition of signal. At 23:27 standing by, this is Skylab Control.

CC Skylab, Houston through Goldstone for 12-1/2 minutes.

CDR Hello, Houston.

CC Hello there.

CDR (garble) Be advised we have invented - we have - - We are getting a little coolant break. It's pretty warm down there. So we are progressing slow but sure and everything so far is working.

CC Okay Pete. We nad a little dropout there, some noise. Could you tell us what step you're on?

CDR We're about to put rod Delta on.

CC Roger, copy.

CDR Okay, we had no trouble venting it down. It vented in about 4 minutes and it held zero for 10 minutes without any outgassing. Going at it very smoothly and, so far, the rod extension has gone very easily. And as I say, we're just taking a little heat break.

CC Hey, that's a good lick.

CDR And Paul has terminated mol sieve 1B bake-out. Now we noticed that the dewpoint has gotten up to 44 and we want to know whether you want us to go ahead a little later in the day or (garble)

CDR Hello, Houston. Are you there?

CC Roger.

CDR You're breaking up, Hank. Did you copy my last about the mol sieve?

CC Roger, understand you are terminating the bed-1 bake-out.

CDR That's right. Also, did you get in on the onboard dewpoint?

CC Roger, we copy 44. Is that correct?

CDR That's affirmative. If you want us to do it later on, just let us know and we'll do it. Now I have something else on a PP CO2. We've got three active sensors and they are all reading differently. Just for your information - -

END OF TAPE

PLT this is how we'll do it.
CDR Now, I got something else on the PCC 02. We've got three active sensors, and they are all reading differently, just for your information. Sieve B IN is reading 2 millimeters, Seive A is reading 3, and surprisingly well,not so surprisingly because , since it's been doing it but Seive A-OUT is reading about 4-1/2.
CC Roger, we copy, and we have telemetry on those.
CDR Okay. Also, How about, just for onboard information, confirming or correcting our report indication that showed that our Panel 225 the 120 psi 02 regulator is regulating to 140, also, let me look a minute, the N2 is regulating to about 165.
CC Okay. Those figures agree with what we got down here, Paul, and they're acceptable.
PLT Okay. So everythings working right that way but those are the right numbers.
PLT Okay, Henry, Now, let me verify about this parasol extension stuff.
CC Okay. Go ahead.
PLT We can do everything except Step-33,34, and 35 while you're maneuvering the vehicle. Is that right?
CC Stand by 1 minute.
CC Skylab, Houston. we're coming up at in about 5 minutes, with the nominal H- case, and we would like for you not to do any more extensions until after maneuver is complete. Once that maneuver is complete, you're clear to press on through the deployment. The thing we don't we don't want to do is be deploying while - when the maneuver is going on and thrust is firing.
CDR Okay, I thought that might be the case, which wasn't clear before. When's that maneuver going to be over. You know?
CC Stand by. I'll get an answer on that.
CDR Okay. Either a time, or another AOS. Just so we know when we can pick up.
CC Okay. We are about 6 more minutes on this pass, and then we'll be picking up Vanguard at 54.
CDR You cut out, Henry. All I got was 4. Say again.
CC Okay. We have about 6 more minutes on this pass, and then we'll pick you up at Vanguard at 54.
CDR Okay. When can we continue the mission. You want to wait until we pick up at Vanguard? You give us the GO then?
CC Stand by.

SL-II MC-105/2
Time: 18:32 CDT 01:10:32 GET
5/26/73

CC Skylab Houston. You're clear to proceed with the deployment at 23:45.
CDR 23:45, Okay.
CC And we're getting a good picture down here.
CDR Okay. That's TV specialist Dr. Kerwin. Paul he - would you look at the picture of the right window, in the foreground you see the see the MDA, that white painted, (garble) behind that is ATM the strutwork, and mostly the rest of it is dirt. I don't think is this picture you can see the - the thing deployed yet. If you like I'll take it to the left hand window now, and give you a hand held shot of it. And tell me, what are your - what are TV opportunities? Do you have any over Vanguard?
CC That's negative. And we got about 4 minutes left, and if you could give us that other window, we'd appreciate it.
CDR (Garbled)
CDR Okay, Henry - Let me - You did say we could resume deployment at 23:45?
CC That is affirmative.
CDR Okay.
CC And Joe, before we lose you, we would like to get the TV on the BTR, in any event.
SPT Okay, I'll turn it on, and you guys can start it anytime you want. How's that?
CC We're going to have to have you start it, because we probably won't be in a station contact when they get it deployed.
SPT Oh. Okay. You wanted - You wanted to get it on the BTR, the deployment itself.
CC That is affirmative.
SPT Oh. All right.
PAO Kerwin has moved the camera over to the left Command Module rendezvous window looking up through the telescope mount truss, back toward the area where the parasol should be poking up through the scientific airlock. You can see the bottom of the - see the bottom of the telescope mount.
SPT Okay Henry, you're looking at a hand held view out of the left window, with the monitor between my knee and unfortunately, I don't think you can see the orange sail material, which is right in the center line of that ATM strut - (garble), because I have to move my head to the very right hand side of the window to see it, and I can't get the TV camera in over there. There isn't room.
CC I guess we're having trouble seeing it.

SL-II MC-105/3
Time: 18:32 CDT 01:10:32 GET
5/26/73

SPT If I try to move it to the right, the body of the camera's too long, and I can't hack it.

CC Skylab, we're about 45 seconds from LOS. Vanguard at 54.

PAO This is Skylab Control. We've had loss of signal as the cluster passed out the southern edge of the Texas acquisition circle. Slightly over 12 minutes until acquisition at tracking ship Vanguard, which will be almost straight over head at a 86 degree elevation angle. 90 Degrees being straight up, obviously. Total pass time of 7 minutes and 20 seconds. The crew had attached several of the extension rods and had it partially deployed through the airlock scientific, scientific airlock, and on the television picture from the lefthand window, the still folded canapy could be seen at the apex of the truss frame of the telescope mount. Any subsequent television will be loaded on the on-board vidio tape recorder, in as much as there are no more stations with live capability until tomorrow. We'll return with this circuit in 11 minutes with the Vanguard pass. After Vanguard, it will be about an hour and 8 minute gap again until Hawaii. At 23:43 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-106/1
Time: 18:52 p.m. CDT, 1:10:52 GET
5/26/73

PAO This is Skylab Control, 23 hours 52 minutes Greenwich mean time. A minute and a half out of tracking ship Vanguard at the start of revolution number 177 for the orbital workshop. We should continue to hear a progress report on deployment of the Skylab parasol. After Vanguard there will be another long break of an excess of an hour before we come up on Hawaii. Stand by now for the resumption of communications from the crew of Skylab and the ground.

CC Skylab, Houston through Vanguard for 7-1/2 minutes.

PLT Roger, Houston. The parasol is I think completely deployed. I'm just going down to check on it.

CC Roger.

PLT It's not completely extended, it's not deployed.

CC Roger.

CDR Correction, we're about to extend rod Echo, rod Echo.

CC Okay.

CC Roger, copy rod Echo.

PLT Hey, Henry?

CC Go ahead.

PLT Okay. According the the procedures now, after we get E out, it reads like we put F and G together and push all the way out, but there's a broken (garble) on E. I just want you to (garble)

CDR Okay, I think our (garble) is the one we used to lock the 4 rods. (Garble) And to release the springs - -

PLT Houston, we're not reading you. We're going to move up to the MDA and talk to you.

CC Okay, we've been having a little trouble with Vanguard. Have we got good comm now? How do you read?

PLT Loud and clear. What's the story with the stripe on F? The procedures don't say anything about it.

CC Okay, step 27 tells you about rod F.

CC After you put F on and 26 you move it out to the mark and then clamp it.

PLT Okay, I got you. I read that over.

PLT Now the two marks on E are only about an inch and one half apart. That's right, huh?

CC That's affirmative, and when you get to the first mark that should be the point where the telescope and rods start locking and when you reach the second point you should be in a vicinity where all of them should be locked.

PLT Okay.

CC But if you have any doubts we want to push it further until you have no doubts that all the

telescope and rods are locked.

PLT Okay. (Garble)

PLT How important is TV Hank? It's dark outside now, vou want to wait for light?

CC Negative. We want to get it out.

CC Skylab, Houston. We would like for you to get a visual verification on the deployment. Whether we get TV or not is not important. We want you to have a visual on it though.

PLT No chance of a visual, Paul, until we go into sunrise.

PLT When did that start, Hank? We're at the first mark on E now. How far can we progress before dealing?

CC Okay, you can progress all the way up to step 32. That's when you start the final deployment.

PLT Okay.

CC Thirty-two is releasing the brake. Go up to 32. We have about 26 minutes to sunrise.

CC And we're one minute from LOS. Our next contact is Hawaii at 03.

PAO This is Skylab Control. Apparently we have had loss of signal through Vanguard with the Skylab cluster. Not too much further to go now in the extension rod attachment to bring the Skylab parasol out to the full extension point where the 4 ribs will fly upward and outward to 90 degrees to the center pole. However, they express a desire to wait until spacecraft sunrise before doing this. And sunrise for them will be in 23 minutes. However, the Skylab will not be over any ground station for another hour. Hawaii in 59 minutes at 00:03 Greenwich mean time. This is Skylab Control.

END OF TAPE

SL-II MC-107
Time: 19:32 CDT 1:11:32 GET
5/26/73

PAO This is Skylab Control 0032 Greenwich mean time. Skylab space station just crossing the island of Ceylon on over into the Bay of Bengal on revolution number 178. Fifty-two minutes remaining until the spacecraft sunset. And it is hoped that the Skylab parasol deployment will be accomplished during this day side pass. We're still a half hour out of Hawaii. It's fairly quiet in the Control Room here. People are taking a , again taking this long LOS break as an opportunity for meals, getting a cup of coffee. We'll bring up the circuit again at acquisition Hawaii in 28 minutes. And at 0033 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-108/1
Time: 19:53 p.m. CDT, 1:11:53 GET
5/26/73

PAO This is Skylab Control, 00:53 Greenwich mean time. Skylab space station and command service module, known as the Skylab cluster, now nearing the three-quarter-way point of revolution 178, crossing just south of the Aleutian Island chain, some 8 minutes and 30 seconds out of acquisition at Hawaii. A group of about 30 people just came into the viewing room here in the control center. This group is made up of people from the Johnson Space Center Technical Services Division, Crew System Division, and other elements of the NASA center, plus people from the support contractor organizations who were involved in design, fabrication, and testing of the Skylab parasol. They've come in to see the final - hear the final report of deployment, hopefully, which will be over Hawaii and most probably over Vanguard a few moments later. We'll be up again in 7 minutes at 00:55 Greenwich mean time. This is Skylab Control.

END OF TAPE

SL-II MC-109/1
Time: 20:02 CDT 1:12:02 GET
5/26/73

PAO This is Skylab Control 1 hour and 1 minute ground elap - I mean Greenwich mean time. We have had data acquisition through Hawaii tracking station. We'll stand by for resumption of air-to-ground communications. This pass is only 5-1/2 minutes long. This is Skylab Control standing by.

CC Skylab, Houston to Hawaii for 5 minutes.

PLT Roger, Houston. Stand by one, we're trying to get the PB on the VTR and Pete will have a chat with you.

CC Skylab, Houston. We've got about 4 minutes left on this pass. Can you give us a report?

CDR Be right with you, Houston.

CDR Okay, Houston. We had a clean deployment as far as rods clearing and everyhthing, but it's not laid out the way it's supposed to be. And we've got pictures of it on the VTR for you. Now right at the moment, we've operated voided the rod in and out a couple of inches short stroke-wise rapidly, which has improved the deployment. But the problem seems to be that the folds in the material have taken too much of a set. And it is more fully deployed in the front across the upper skirts. But, there are two folds emanating from the set, 3 folds emanating from the center deployment plate; one to each side and one towards the base skirt. So, in effect, we have a trapezoid which is the smallest dimension toward the base of the vehicle. Now, that's as far as we've gone. We're open for suggestions. I have the feeling that if we pulled it all the way in close to the vehicle that it would touch in the back and along the sides. It might possibly help the folds out of the material and if we did push her back out again and gently oscillate it in and out, as we have in the past, which seems to improve it. But, I think we've gotten about as much out of it as we're going to get. My guess is we've only got about 12 to 14 feet at the back end with perhaps 18 to 20 at the front end. And I don't even know the dimensions of the sail.

CC Okay the dimensions are supposed to be 22 by 24, Pete.

CDR Well, it's possible that we've got it completely backwards and we could turn it 180 degrees. That would - which way do you want - which dimension do you want the 24?

CC Twenty-four is the length of it, 22 feet should be the width.

CDR Okay. Then it is in fact a square. I mean a rectangle.

CC Yes.

SL-1I MC-109/2
Time: 20:02 CDT 1:12:02 GET
5/26/73

CDR Is that right, Houston, it's a rectangle?
CC Roger, it's rectangular and the center, of it - the hub is off center on the rectangle. There's to be the poles that are pointed back toward the ATM should be the ones that have a length without fabric on them.
CDR That's the way it is.
CC That's the way it should be.
CDR If you are able to dump our TV we, I think, give you a pretty good TV of it. It just does look to me like the end aft toward the aft skirt has got three wrinkles. One coming between the aft skirt line and one on each side running along you know running outboard to the side. And that it's pinched the fabric, you know, It's taken a permanent set. And the front end, which has the strings on it, that's pretty well deployed.
CC Okay, we're about 15 seconds from LOS. We'll think about it and we'll talk to you at Vanguard. We hope to have a plan then. Vanguard is coming up at 30.
CDR Three zero, Roger.
CC Skylab, Houston. If you can still read, we'd like to terminate that Bat A charge and get Bat B to charging. And also, if anybody is free, we'd like to start them on the water flight servicing.
CDR Okay, we were just going to ask you that.
PAO This is Skylab Control. We've had loss of signal through the Hawaii tracking station. Coming up on Vanguard in 21 minutes. There was considerable applause in the viewing room from the people who are involved in designing, fabricating, testing the parasol when it was reported that it had deployed with a few wrinkles in the after end of it - end pointing - facing toward the telescope mount. Meanwhile, here on the ground, discussion is underway on how would be the best way to try to shake the wrinkles out. And, hopefully, over Vanguard, some word will be passed up to the crew on how would be the best way to correct the problems and get the full 22 by 24 foot dimensions out of the parasol for the optimum solar shading. We'll come back up at Vanguard in 20 minutes. At 01:10 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-110/1
Time: 20:21 CDT 01:02:21
5/26/73

PAO This is Skylab Control 01 hours 21 minutes Greenwich mean time. Eight minutes now, out of Vanguard - Vanguard Tracking vessel, and we should have further reports on retraction of the main stem of the Skylab parasol. Here in the Control Center, there are several little discussion groups scattered around the room, on how the best way to shake loose the folds in the canopy. The main consensus seems to be to pull it down fairly close to the workshop and either go solar inertial and leave it as is, or perhaps rotate it rapidly to try to use this centrifugcal force of the rotation against the aft ribs to shake out the wrinkles in the fabric. And we'll be coming up on the reset in the control moment gyros over Vanguard, which will require some TACS thruster firings. And perhaps the plume from the thrusters may have some effect in shaking out the wrinkles in the canapy. We'll be back up in 6-1/2 minutes for the Vanguard pass at 01:23 Greenwich mean time. This is Skylab Control.

END OF TAPE

SL-II MC-111/1
Time: 20:28 p.m. CDT, 1:12:28 GET
5/26/73

PAO This is Skylab Control 01 hours 28 minutes Greenwich mean time. About a minute and 56 seconds out from Vanguard tracking ship nearing the end of revolution 178 for the workshop. After Vanguard, we again have a long gap of about an hour before Hawaii. Hawaii pass will be almost due overhead, 81 degrees elevation, maximum elevation. And we expect another status report from the crew on the retraction operation of withdrawing the center support rod, taking off the rods as they bring it in. Forty-five seconds to acquisition. However, occasionally we get acquisition ahead of the clock time. So, at this time we'll bring up the circuit for the Vanguard pass, which has a duration of 10 minutes and 2 seconds. Skylab Control standing by.

CC Skylab, Houston through Vanguard for 9 minutes.

CDR Go ahead.

CC Roger. First off, we'd like to get Joe to tell us what he saw out the window. We would like to know if the rods are approximately in the same plane.

SPT Well, we don't think so, Houston. We can see the ends of all the rods. It's completely free of anything and there's nothing hanging it up.

SPT And if you want to know what it looked when it deployed I can see the thing stickin up, bunched in the middle, billowed a little bit at the top and at the bottom, and when they deployed it, all four legs came up. The front legs, that is, the forward ones closest to the command module, came up smartly. It looks as if they actually went over center a little bit, then bounced back. The back ones did not come up, it looked like, all the way - didn't come to 90 degrees. They went slowly and they just kind of drifted to a stop.

CC Okay. What kind of an angle do you think they made with the plane of the first two rods?

SPT It's your guess, but I guess 30 degrees, something like that.

CC Okay, we would like for the CDR and the CMP to go back in the workshop and pull her in and we'd like for you to pull as many rods in at one whack. Undo the rod break and bring in about three at a time and them remove them and we want you to complete the procedures down to step 43 so you've done a full retraction and got the rod A configuration proper. And we're going to be doing a nominal H-cage at the end of this pass and we want to get it in close.

SPT It worked.

CC Skylab, Houston. We'll give the time for that reset so that you can be sure and have the rod brake on when we start it.

SPT Roger.
CC Skylab, Houston the time for the reset is 01:36. That will be the time for the nominal H-cage. 01:36 and we'll warn you again at - close to that time.
CDR Understand 01:36. That's two minutes from now, but we'll hustle.
CC Roger, and once we get the parasol retracted, we do not plan to do anything more with it tonight. We're going to take a look at it, and we think we've got almost a full deployment and pulling in will do the rest for us.
SPT I understand.
CC And for the CDR, we're not too concerned about getting it all the way down before the reset. The main thing we want is that you do have the rod brake on when the reset starts or the nominal H-cage starts.
CC Skylab, Houston we're going to give you a little more time here. We're going to delay that reset to 40.
CDR Okay. 40.
SPT Okay, we're pulling it in Houston. Be advised the rods we're pulling in are quite cool and feel very nice to the touch.
CC Roger, copy.
CC SPT, Houston. Did the CDR, PLT take a rest between the Hawaii and Vanguard?
CC SPT, Houston.
SPT Go ahead.
CC Roger, we'd like to know if the CDR, PLT took a rest between Hawaii and Vanguard?
SPT They took a break, Houston.
CC Roger, copy.
SPT Okay, Houston, we got it in.
CC Okay. I understand you got a full retraction and you've followed - completed the checklist through at least 42.
SPT I didn't say that. We're presently double checking that. We got it all the way into the mark on rod Alpha and we rod brake clamp thing tightened down.
CC Roger, sounds good. We're going to start the reset - the nominal H-cage immediately. Now, for the rest of the evening, we'd like for you guys to go back and if you haven't eaten already, eat, and we're going to try to get on with the nominal flight plan.
SPT Okay, good enough. Also rod B is gathering frost as it lays here in the fiery workshop.
CC And we'd like to insure that you do

SL-II MC-111/3
Time: 20:28 p.m. CDT, 1:12:28 GET
5/26/73

complete step 41 there, Paul. We'd like to make sure we get the push rod knob A on there and the set screw in.

PLT That didn't work, Hank. It's a little tough getting these two sections separated. We'll get on that as soon as we can.

CC Okay.

CC Okay, we're almost LOS now, we'll be picking you up over at Hawaii at 37.

PLT Okay.

PAO This is Skylab Control. We've had loss of signal through the Vanguard tracking ship. With a successful retraction and clamping of the center pole of the Skylab parasol. The brake set prior to the time the commands were sent to reset the control moment gyros using the thrusters on the orbital workshop. Still 18 minutes remaining of nightside pass. It will likely take a couple of dayside passes before a trend is observed of reduced temperatures - temperatures coming down. Acquisition directly over the Hawaii station in 55 minutes. At 01 hours 41 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-112/1
Time: 20:58 CDT, 1:12:58 GET
5/26/73

PAO This is Skylab Control. 01 hours 58 minutes Greenwich mean time, 36 minutes away from Hawaii. Skylab cluster crossing the east African coast in the straights between the Ieland of Madagascar and the continent of Africa. Here in the Mission Control Center there's a great deal of confidence that the recently deployed Skylab parasol will have a good effect on the internal temperatures of the Skylab workshop. Johnson Space Center Technical Services Division Chief Jack Kindsler just spoke to the group of people in his division and other elements of the center and support contractors in the viewing room, and expressed the belief that as the parasol gets warmed up by the Sun during the next couple of dayside passes, the wrinkles in the after end of the canopy which apparently were set by the cold soak during the early part of the deployment will indeed flatten out. And that the parasol will provide the designed effect of lowering the temperatures, and acting as a parasol in name and indeed for the Skylab workshop. 37 minutes to Hawaii. At 02:00 hours Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-1I MC-113/1
Time: 21:19 CDT 1:13:19 GET
5/26/73

PAO This is Skylab Control 2 hours 19 minutes Greenwich mean time. Skylab cluster now over north central China, midway through the 179th workshop revolution. Seventeen minutes out of Hawaii. Thirty-eight minutes remaining in the current dayside pass. And flight controllers will be observing the workshop temperatures during the next couple dayside passes to see if there is a trend of temperature reduction in the workshop structure and in the atmosphere. It will probably take at least 2 revolutions for the temperatures to begin a downward trend. And hopefully through the night, the workshop will be in a comfortable temperature, by the start of tomorrow's crew workday. People here in the Control Center are well satisfied with the deployment of the Skylab parasol. And as the inventor of the parasol mentioned in his pep talk to the people in the viewing room who had built and tested the device, he felt that the wrinkles seen in the after end were a result of cold soak and that as the Sun warmed up the canopy, the wrinkles would flatten out. We're looking now at a handover from Flight Director Neil Hutchinson to Milt Windler at about 10:15 central time. And anticipating a press conference shortly there after, perhaps 10:30 p.m. central. Participants will be William C. Schneider, Director of Skylab Program NASA Headquarters, Flight Director Neil Hutchinson, and Jack Kinsler who is Chief of the Technical Service Division Johnson Space Center, the man who's brainchild the parasol was. Fifteen minutes out of Hawaii. at 02:22 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-114/1
Time: 21:36 CDT 01:13:36 GET
5/26/73

PAO This is Skylab Control 2 hours 36 minutes Greenwich mean time. We have acquisition now, even though the clock says we're some 15 seconds away, through the Hawaii station. Almost directly over the Hawaii station. 81 degrees elevation angle maximum. We'll see how the solar sunshade or Skylab parasol is working as we read temperatures on this pass. See if they're coming down.

SC See you over Hawaii for 10 minutes.

CC Okay, we got a lot of things we want to talk about on this pass. I guess I'll get on with it. First off we're planning a medical conference at Vanguard, which is about 03:04. That will be the next station contact after this one. The next item is that we have a requirement that one of you wear the OBS tonight, since we don't have any (garble) in the Command Module, and depending upon the CSM fan, we're recommending the SPT.

CDR Okay.

CC And for the SPT, we'd like to get his opinion on - we can only - we can't dump all of the VTR tape to get that pictures back of the parasol, and we'd like to know whether it would be better to lop off the first part or the last part. In other words, about where in there was the pictures of the deployed parasol?

SPT Hank, if you might get the pictures of the actual deployment at the beginning, and the pictures most actually representative of the configuration in which we ditched it down are at the end, and you can take your choice.

CC Okay, thank you.

SPT Hey, Hank.

CC Go ahead.

SPT I got to apologize profusely, but I inadvertently opened the circuit breakers to the amp hour integrator number 8, and it's reset to zero onboard.

CC Roger. Copy

CC And our maneuver plan is here, we're going to take a look at the temperatures, and we think they're coming down. We're prepared to command a solar inertial here over Hawaii. Just let you know, and we're also prepared to back that up at Vanguard as a last choice.

SPT You say you think they're coming down or if they're coming down.

CC Well we're looking at them now to see what they look like.

SPT We just finished weighing all the mol sieve heat exchanges. What do you do with them? Just stand by until tomorrow.

SL II MC-114/2
Time: 21:36 CDT 01:13:36
5/26/73

CC Okay, while we're getting an answer on that, we'd like to know how far you got in the - your checks, have you done the quiercent panel yet?

CDR Yeah. I rated panel 351, which we're leaving UP so that we can have water. I was gonna do 352, 382, and 378, 79, 76, 399, 377, 600, 602, 601,603, 604 and side hatch tunnel hatch, and that's it. The rest of it's done. BAT B is being charged. I just did an 02 purge.

CC Okay, what we're getting at, Pete, we - we're wondering how you feel about trying to get the VCS dump in tonight, and get some circulation going.

CDR Boy, you bet, we can do that.

CDR Hey, if you think those temps are coming down, and that will help any, that's no strain. We're in good shape up here.

CC Okay, then, in that case, we'd like for you to do Step 1 & 2 on Page 2-62, and following that, on Panel 390, I'd like to get all four OWS heat exchanger fans on. Just place all four of them to on. And tomorrows flight plan, of course, we'll delete that part of it and do Steps 3 & 4.

CDR You say you wanted the OWS heat exchanger fans on or off?

CC On. O N. After you install the duck according to Steps 1 & 2 on Page 2-62, Panel 390 in the lock there, we want to get all four heat exchanger fans on.

CDR Will do. How did the temps look?

CC Okay, it looks like to us the temps are coming down, so we're going to put the solar inertial in WORK.

CDR Very good. Very good.

CC Okay, and another thing, Pete, we're looking at two flight plans tomorrow. We - We're just taking a tentative look at a flight plan that doesn't consider anything in the workshop. And we have the other alternative is going as planned with a what we launched with. Now, we'll try to get - We'd like to get your opinion on this, how you feel about working in the workshop tomorrow.

CDR Well Buck, if you bring those temperatures down any at all, I'm guessing, but, we spent the better part of 2 or 3 hours down there, and everytime we'd get hot, we'd come up and take a rest. Now, if the temperatures are coming down, and they've come down at - I don't know - Maybe Paul's got a different idea, but I'd say it was at least 120 in there today, but you can work in there. It's dry. We didn't get any problems with heat, whenever we just got too hot, we'd come up and cool off for awhile and

cool off and go back to work, so if they come down at all, I would like to stick with our original flight plan, and go start activating it down there.

CC Okay, our best estimate, Pete, is we'll be below 100 degrees in there by tomorrow morning.

CDR Well, what do you think it was in there today?

CC We guess about 125.

CDR Okay. Well, I think we're pretty well calibrated. You bring it down 20. We aren't going to be riding any bicycles or anything, but we can get down there and at least start configuring things, and we'll just press along as best we can. If we cannot, we can come out. As far as the temps are coming down. I think that's great. I'd like to press for the normal flight plan.

CC Okay, I guess we will concur with that then. We uplinked you a contingency on dock procedure in regard to the p. . By hooking them together, you probably got now. That is just a get me home thing. Tomorrow we hope to have a better analysis of the probe for you.

CDR Okay, very good.

PLT Okay, Henry, when we put on the VCS ducts and we turn on the OWS heat exchangers, what do we do about the vent fan. Do you want to unplug the vent and go ahead and fire up that fan, or leave it like it is?

CC Stand by just 1.

PLT That's the A - that's the A-N duct fan.

CC Roger. I understand. Let me get an answer on that right quick.

PLT Okay.

CC Roger. We'd like to proceed with uncapping that duct, and getting the fan going.

PLT Okay. I got this list of SEVA questions. Do we have time for me to go over them with you now?

CC We've only got about 2 minutes left right now in this pass. I guess we'd like to delay those.

PLT Okay.

PLT How about if I record them on Channel A for now and you can listen to them, and if we get a chance, I'll give them to you, and otherwise, they're on tape, and you can listen and see if you got any further questions.

CC Okay. I was just getting ready to come up to you with that. That's real good. Press on with that.

PLT Okay.

CC Skylab, Houston. You're on your way to solar inertial now.

SL-II MC[illegible]
Time: 21[illegible] CDT 01r13:36 GET
5/26/73

CDR Roger
CC We're about 30 seconds from LOS, Skylab. We'll be coming up on Vanguard, as I said, at - it'll be about 09 now, and we'd like to say, you guys did a tremendous job down there. We've got everybody smiling here, now that we've got that parasol out.
PLT Okay. Thank you. And tell those people that I'm awful sorry about that breaker. I thrashed it around (garbled) in that heat exchanger break, but I just flipped it up with my toe.
CC And if you still read us, we'd like to get that (garble) system activated.
CDR Roger, you got a page number for that, Hank?
SC Okay, that's page 2-137.
PAO This is Skylab Control. The Skylab cluster has gone over the hill from Hawaii tracking station. It is now just north of the equator in the Central Pacific. Twenty minutes to Vanguard. The trend in temperatures as shown on the numerous different measurement points throughout the workshop is definitely downward. And as mentioned by spacecraft communicator Jack Hartsfield, it's likely that the workshop atmospheric temperatures will be below 100 degrees Fahrenheit by tomorrow morning. They're now around 120 to 125. We're still estimating around 10:30 for the change of shift press conference in the Johnson Space Center news room. Participants again. Skylab Program Director, William C. Schneider. Flight Director Neil Hutchinson, and Jack Kinzler, Chief of the Johnson Space Center Technical Services Division, who will discuss his invention. Eighteen minutes to Vanguard where there will be a medical consultation on a private loop. And at 2 hours 50 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-115/1
Time: 22:07 CDT 1:14:07 GET
5/26/73

PAO This is Skylab Control 3 hours 6 minutes Greenwich mean time, a minute and 55 seconds away from the tracking ship Vanguard. Skylab cluster crossing the western coast of South America. We'll come across over the horizon from the tracking ship Vanguard in the next few moments. The command will be up-linked to the spacecraft through the Vanguard to go to solar inertial attitude even though we are, at this time, still in darkness, 24 mirutes away from the spacecraft sunrise. After Vanguard, it will be more than an hour before the next tracking station, Hawaii. About an hour and 2 minutes between LOS, Vanguard and AOS, Hawaii. We will stand by for Hank Hartsfield's first call to the crew.

CC Skylab, Houston. We're with you for another 4-1/2 minutes.

SPT Okay, Houston. We've had a - well we just had another one. We keep getting ACS MALPS, CMG SAT, and rate gyro problems. We have a single talkback in the Y-axis rate gyro and gyro 1. We're not solar inertial. We are in ATT HOLD CMG off the solar attitude. And we'd like you to share with us if you have any knowlege what the heck is going on.

CC Okay, what we've done is maneuver back to an attitude that should be approximately solar inertial. We're in ATT HOLD, we're not in the solar inertial mode. We have also seen the rate gyro failure that - well, at least, redundancy management has claimed that one of the rate gyros in the Y-axis has failed. And that's about the status as we see it now.

SPT Is this the same kind of failure that they have been seeing for 2 days?

CC That is affirmative.

SPT Okay, I'm going to INHIBIT it then, on caution and warning it's going about every 30 seconds. And our CMGs are remarkably close to saturation when they worked just a short while ago. And is that because of the rate gyro drift?

CC Okay, that saturation is due to maneuver, Joe.

SPT Well okay. It wasn't that bad earlier in the maneuver but I still believe you. And what is your ground figure for TACS percent (garble)?

CC The last figure I saw was 51 percent. In fact, we're showing 51.6 percent now, Joe. Okay, we got a couple of other items for you. We recommend that you leave all the hatches open tonight. No need to close them up. And we'd also like to inform you that there will

not be a trim burn tomorrow. We only have 5 foot per second capability and we're going to try to use it at the optimum time.

SPT Okay, no trim burn. We will leave the hatches open tonight. One to 5 feet per second above.

CC That's above the SMRCS red line.

SPT Okay.

CC SPT Houston. We'd like you to select 1 and 3 in the Y AXIS. And you may get another failure alert there until we can get the drift correction in.

SPT Okay, you don't want me to do any DAS work, just select it on the panel, right?

CC We'd like you to select it through the DAS.

SPT Oh, Okay.

CC Skylab, Houston. As soon as you grt the gyros configured, we'd like you to do a nominal H-cage. We're about 20 seconds from LOS. We hope you guys get a good night's rest, and we'll see you in the morning.

SPT Gyros and then a nominal H-cage, Okay.

CC And Skylab, if you get a chance, we'd like you to put the evening status report on channel A.

PAO This is Skylab Control. We have apparently had loss of signal through the Vanguard tracking station. One hour and 37 seconds until Hawaii acquisition. A very low elevation angle pass, only 2 and a quarter minutes long. And then Vanguard an hour and 28 minutes from now. By then the crew will likely be in the sleep period. Some difficulties experienced with the Y-axis rate gyro, which the flight controllers here in the Control Center feel confident they will be able to sort out and go into solar inertial rev later than intended. They had planned to command solar inertial attitude during this Vanguard pass, but it's been delayed 1 rev until the rate gyro problem is sorted out. At 3 hours 19 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-116/1
Time: 23:32 CDT 1:15:32 GET
5/26/73

PAO This is Skylab Control at 4 hours 32 minutes Greenwich mean time. We're going to play for you now the record-recording of the air-to-ground during the Hawaii pass. As it turns out, the flight director indicated that he needed some additional conversation with the crew at Hawaii. And the crew is still in the process of wrapping up before going to bed and they will be again contacted now at Vanguard and possibly even as late as Ascension. So we are now going to play the Hawaii track and we'll have another acquisition or signal coming up in a little under 15 minutes. This is Skylab Control and here is the air-to-ground.

CC Skylab, Houston. We're AOS over Hawaii for the next 2 minutes. How do you read?

CC Skylab, Houston. We're AOS over Hawaii for about the next 3 minutes. How do you read?

CDR Read you loud and clear. How me?

CC Okay, same here. Sorry to bother you but we've got a short pass, a couple of important items I'd like to get up to you. We're going to be turning on your airlock module primary coolant loop. And that's going to give you a pri cool flow caution or warning loop.

CDR Okay. We're in the process of dumping the condensate plate as soon as we brought the thing on condensate tank filled to the top with water. We're working that problem right now.

CC Roger, understand it filled with water. Okay, we would like on panel 203 for you to take the mol sieve B fan power to secondary.

PLT It's in secondary, Houston.

CC Roger, thank you. We know you have been having some problems still with the APCS and we're going to be trying to work those out for you a little bit later. So, just don't worry about them right now. We're trying to get back to solar inertial and didn't. We'll be trying - -

CC Rog. We said that we should be close to solar inertial attitude. We're not solar inertial mode, we'll be working that ourselves.

PLT Well, you're not even very close. You don't have (garble). Do you know where to go?

CC Probably not.

CDR Well I'm looking out the window and it looks as if you need plus rotation about Y and a plus about X. And I'm not sure of the magnitude, but about 10 degrees or more.

CC I'm sorry, I couldn't copy there. Did you say we were about 10 degrees off?

PLT We are more than 10 degrees off. It's hard to estimate, but it's a plus Y and a plus X rotation.

We are not going to touch it this time. We're going to let you guys fool with it. We'd like to get in solar inertial once so we'd know what it looked like and if we get off we can get ourselves back on.

CC Okay, we'll try to work that.

CC Okay, we've got a pass probably in about oh, Vanguard coming up. We'll be trying to work that then at around 4:46.

SPT Okay, what is the temperatures doing in the workshop there?

CC I'll try to get a report for you on that. Meanwhile, we'd like to find out if you did put the SEVA report on channel A or B. We're dumping A right now. We didn't see it there last dump.

SPT We haven't gotten to the evening reports. It is still about the middle of the afternoon for us. Pete and Paul are working pretty hard on the condensate system They're dleaning up the command module and stuff like that.

CC Okay understand. We just want to make sure you did know that we were recording channel A. And you will be putting the medical status report on channel A for us later. Is that correct?

SPT Yes, and we're going to have a couple of large (garble) I think because we have enough other problems coming up. We're going to stick with it. We are in good shape andwe've had our private medical talk. And we don't have anything to report.

CC Roger. I think all we are interested in there is the food and, you know, whether you took any drugs or not and that kind of stuff.

SPT We are eating like hogs and drinking lots of water.

CC Very good.

SPT - this evening status report and we'll get as much of this to you as we can.

CC Roger Joe, understand. If you could also put down, we would like sort of a relative amount of time spent between the airlock module MDA and the workshop today. I guess they're kind of interested in what kind of temperatures you were experiencing. You can put that on channel A.

SPT My off the cuff answer (garble) they can apparently get thatby looking at my biomed tonight.

CC Okay, they were kind of interested in that for the other guys too though Joe. Okay, the skin tents have dropped about 70 degrees. We're going to have LOS here in about 1 minute. We're going to be over Vanguard at 4:46. We were kind of hoping that you guys were going to bed. Do you want us to give a call there or not?

SPT Yes.
CC You want us to give you a call at Vanguard understand.
SPT Roger.
CC And I guess I must have got somebody there. We would like to verify that you did get the elephant trunk installed between the OWS and the airlock module.
SPT Affirmative.
PAO This is Skylab Control. We have a note now from Dr. Willard Hawkins on the medical breifing earlier. This is a private conversation between medical officers to assess the status of true health. It is not to prescribe drugs or anything of that sort. Here is the information given to us by Dr. Hawkins. "The crew has remained in good physical condition during the first 2 days in spite of a fatiguing first day and also in relation to the thermal stress of today in the orbital workshop. No symptoms of motion sickness have been experienced." And that is the end of the report. This is Skylab Control at 4 hours 38 minutes and 8 seconds.

END OF TAPE